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AN INTRODUCTION TO ECONOMIC PROBLEMS

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AN INTRODUCTION TO ECONOMIC PROBLEMS

FOR STUDENTS AND TEACHERS

BY

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To those teachers

who believe that schools can and should play an important part in bringing about a high level of economic welfare for all of the people all of the time.

FOREWORD

As we watch from our vantage point of the present the spectacle of man's advance through the ages from a state of savagery to his present stage of civilization, one fact strikes us with particular force: That advance has consisted in large part of increases in man's command over the material goods which gratify his wants. For the most part general intellectual improvement and moral advance have waited on developments in the ability to produce material goods.

Man's efforts to gain control over material goods and services are usually referred to as his business affairs; it is with these that the science of economics deals. The study of economics would, therefore, seem all-important. It deals with problems which affect each and every one of us constantly. A knowledge of these problems is necessary if we are to solve them in any but a hit-or-miss fashion.

The currents of economic forces run deep. To follow their course and discover their causes and effects is a task that requires more than a glance at the surface of the stream of business activity. Those who will solve the economic questions which face the world today will be those who have armed themselves with the implements of economic theory and have the will to attack the problems with a logical consideration.

In a country such as ours it is impossible for a handful of students to carry out the changes and refinements that are needed in our economic system. A democratic system calls for widespread, co-operative action. Logical and intelligent

action can come only if the majority, at least of our leaders, are equipped to attack economic problems intelligently.

This volume is an attempt to stimulate a more widespread and informed consideration of economic problems. To do this, it will tell the story of some of our more pressing economic difficulties in nontechnical language. It is assumed that the purpose of the study and discussion of economic problems is to improve the economic order. The present discussion, therefore, is concerned also with the place of the teacher and of the school in this task. However, the work should be of interest to any student or citizen who would like a simple discussion of current economic problems.

As is inevitable, the discussion is from a particular viewpoint. This viewpoint will be stated at once so that the reader may be on his guard against being unduly influenced by the writer's bias. Harm is done, not by bias, but by those dealing with crucial problems who pretend to be unbiased. It would be preposterous for the author to claim that there is not back of his thinking a certain background that colors his thought.

This book is written, then, from a background that has been closely associated with private ownership of many of the means of production. In this volume no attempt will be made to justify this position. It is simply assumed that this is the form of organization that will exist in the United States during the coming generation. It may be, however, that this form of organization will be profoundly modified in terms of the possibilities of the present industrial order. Indeed, it is also assumed that the present economic order is not highly efficient. What is more important, it is our contention that it could be made highly efficient without

changing the essential elements of ownership of many of the means of production. The method by which this is to be brought about is to substitute a better planned and better co-ordinated economic order for a chaotic, anarchistic, irresponsible individualism.

No attempt has been made to give a systematic presentation of the theories of production, distribution, and exchange and of other particular topics that are the special field of the economist. These are adequately dealt with in other volumes. It is hoped that the reader will be stimulated to acquaint himself with these topics if for no other reason than to check the validity of the author's conclusions and suggestions. Even the expert in economic theory may find suggestions in certain parts of the discussion.

The major task that has been attempted here is to bring together in one place a modern consideration of some of the more important economic problems and to discuss them in a way that will be helpful to the student, the citizen, and the teacher. An attempt is made to show the enormous change that new economic conditions should be making in our material, moral, and cultural life. If this book plays even a small part in bringing about the increased economic welfare which it describes, its purpose will have been fully accomplished.

Many of the ideas expressed in this book are due to discussions with my colleagues at Teachers College during the past few years. I am indebted to many of them for the suggestions they have advanced. Professor W. C. Bagley has taken particular interest in the project and has furnished many helpful suggestions. Dr. W. I. Gooch has spent much time in aiding the undertaking. Anne Beth Price has read

and substantially revised each chapter. Mr. W. C. Bagley, Jr., has rearranged and rewritten much of the material, putting it into more useful form. If the material can be understood, much of the credit goes to my students who have discussed it so many times with me during the past few years.

The author desires to express his sincere appreciation of permissions to reprint that have been kindly and freely extended to him by Dr. William B. Munro, California Institute of Technology; Dr. W. M. Polakov in behalf of the Committee of the Society of Industrial Engineers; and G. F. Warren and F. A. Pearson, the authors of "Interrelationships of Supply and Price"; to The Academy of Political Science, Columbia University; The American Federation of Labor; The Division of Economic Research in the Department of Commerce, Washington; The Farm Credit Administration, Washington; The National Bureau of Economic Research, New York City; The Research Division of The National Education Association; Science Service, Washington; Science, New York; and to the following publishers, Albert and Charles Boni, Inc.; Thomas Y. Crowell Company; Houghton Mifflin Company; The International Digest; Longmans, Green and Company; The Macmillan Company; McGraw-Hill Book Company, Inc.; The New York Times; and The Viking Press.

HAROLD F. CLARK

EDITOR'S INTRODUCTION

While Dr. Clark's book is addressed primarily to teachers and to other students of education, it should prove interesting and illuminating to adult groups in general, and particularly to the adult classes that have multiplied so rapidly in the remarkably significant movement which is known in our profession as "adult education." In no other book with which the present editor is familiar have the fundamental economic changes brought about by the second Industrial Revolution been set forth more clearly or more simply. It is especially important that these changes and their causes be taught in clear and simple terms both to the generations now dominant and to the oncoming generations.

Dr. Clark's challenge is both sharp and frank. Mankind is in a position to build a new world of social progress provided that the democratic development of economic and occupational planning can be made practicable. Quite naturally opinions differ as to the practicability of such a course, and recent events indicate that, in the United States, the realization of the possibilities inherent in the new Industrial Revolution will necessarily involve changes in the Constitution. Granting the desirability of such a realization, the most effective solution of the problem would probably be an amendment to the present instrument which would authorize a simplification and a bringing up-to-date of the document as a whole. Fortunately the Fathers were men of sufficient intelligence not to assume that conditions never change or that their wisdom and insight, remarkable as they

have proved to be, would suffice for all time; hence they provided for amendments. Among these an amendment authorizing revision could find a legitimate place. In its present form, as every teacher of government knows, the Constitution is very difficult for the majority of school children and for a goodly proportion of adults to understand. It is replete with provisions regarding issues long since settled and with amendments which change or repeal these provisions.

Organized education, of course, has other duties than merely to insure that the people as a whole be accurately informed as to the possibilities inherent in automatic machinery and the development of the vast reserves of power which the natural resources of the country provide. There are traits encouraged by the philosophy of "rugged individualism" for which substitutes must be provided if the changes that now seem inevitable are put into effect. The ideal of personal economic responsibility has been a powerful "steadying" force in human life—the belief that one through one's own efforts must provide for one's old age and for the care of one's dependents in the event of premature death. Struggle itself and the consequent selection and rejection have been primary factors in social evolution as well as in biological evolution. On several occasions the present editor has referred to the coming order as a "machine-slave" civilization, and has maintained that its perils are not altogether unlike those of the civilizations that were based upon human slavery. Will men, in general, struggle when the hope of economic reward (or the fear of economic failure) is removed? Some of them will, of course. To the artist and to the scientist, both the gratification in work well done and

the recognition by one's peers of one's superior achievements may be a sufficient incentive, and economic rewards may become relatively unimportant. It is significant, however, that the Soviet Union, which began with a two-to-one differential between those most highly and those most poorly rewarded, has moved more or less gradually to a ten-to-one differential. There is, too, the inescapable problem of the wholesome use of leisure under any form of a "slave" civilization. Organized education should certainly be very seriously concerned with these problems.

On the other hand, of course, there is a very real possibility. The human types that have heretofore been distinctly underprivileged may develop under the conditions of equal privilege a distinctively productive group who will counteract the temptations to indolence and lack of aggressive struggle which clearly lie in an "economy of abundance for all." In view of the high probability that this economy of abundance will come to prevail, a primary task of present-day organized education would seem to lie in counteracting its readily predictable dangers.

WILLIAM C. BAGLEY

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CHAPTER I

THE AUTOMATIC MACHINE

One of the most dramatic episodes of this age is the rise to importance of the automatic machine.

For a long time man dreamed of machinery that would do much of his work without his assistance. Such a possibility was usually dismissed as the product of an overstimulated imagination. It is true that for many centuries man had a few simple kinds of machinery such as windmills and water-mills which would operate more or less independently of human control. The sum total of such machines even as late as 1900 was relatively small.

The first period of the Industrial Revolution, consisting roughly of the nineteenth century, saw the development of power-generating and power-driven machinery which man could employ to help him with the labor involved in his many tasks. The second phase, which began but little more than a generation ago, brought machines that could perform tasks without man's assistance. In the first part of the twentieth century there has been an almost unbelievable development of such machines.

Automatic or self-acting machines have profoundly altered the economic and cultural prospects of mankind. They have made obsolete many social and scientific theories formulated before their advent or without a due understanding of their revolutionary importance.

Automatic machines are making it possible to increase

production at an incredible rate. At the same time production is requiring less and less labor. Increased production with less human effort is familiar in our present economic system. This has been the dream of man through the ages and the end toward which his greatest efforts have been bent. Now that it is a real possibility, an understanding of methods of management of this vast power proves so difficult a problem that in the midst of plenty there are hardship, suffering, and poverty.

Though some would dodge solving the problems created by the machine by advocating a return to the "simple life," meaning by this the abolishment or curtailment of machine production, a realistic survey of industry indicates that the self-acting machines are with us to stay. The question is what we shall do with them. If we are to control them, we must go about it rationally.

A brief description of a few automatic machines will indicate what is happening in the world today. For those who doubt that plenty for all with increased leisure is a real possibility, the following examples of what automatic machines can do should prove enlightening.

I. Some Facts on Productive Capacity

Automatic Automobile Frame Plant. One of the most amazing of the new automatic machines is a veritable giant. It is an entire manufacturing plant within itself. It is designed to make automobile frames at the rate of 8000 a day. The men who were interested in building the plant tell us that the original attempt was to make a plant that would operate entirely automatically; that is, without any human guidance or control. In fact, we find this startling heading in

a magazine article describing the plant: "We build a plant to run without men." [1] The article goes on to tell of this gigantic piece of machinery that was designed to unload steel from freight cars at one end of a plant and without the intervention of human hands to manufacture, inspect, and load the finished frames at the other end of the building.

Following the steel from one stage to the next from the time it enters the mill until it leaves, one is astounded at the operations that are performed by the machine. When the steel enters, it is placed upon platforms and moved about to the required positions; pieces of the proper length are adjusted; gradually the frame is fitted together and bent into the desired shape; a hundred hands rise to pound the rivets into their places; each rivet is inspected, and if too short or too long or too light or too heavy, it is ruthlessly cast aside. Rivets of the proper length, breadth, and weight are moved into place and hammers with the strength of gods pound them into their places. One stands fascinated, almost appalled, at what is happening before his very eyes. The frame moves on, is inspected time and again, and finally winds up finished and passed. The mammoth machines extending over many acres and costing millions of dollars have an almost unreal aspect in their efficient detachment from human control and labor.

One cannot but wonder what will happen to American industry, to American life, when such things become common. When this machine has become obsolete and is only to be viewed in a museum, what will America be like?

If such machinery were appearing in only one field of American industry, it would not be of momentous impor-

[1] *Magazine of Business*, Vol. LV, No. 2, February, 1929, p. 135.

tance; but in almost every field we notice the same thing. Either the machine is actually in use, or there is the potential availability of such a machine bringing its promise to American life. Engineers tell us that the same type of machines might be made for almost all of our American industries.

Automatic Paint Plant. A paint plant recently has been finished where the raw materials will arrive at the plant in cars from which they will be moved to storage bins by automatic conveyor systems. The material will be taken from the storage bins, sent to the mixing machinery, moved on from one part of the manufacturing process to another, all entirely automatically, until finally the filled and sealed paint cans are deposited in the shipping room.

Automatic Glass Factory. For years the glass industry took a frightful toll in human well-being. Many men had to work under conditions that endangered their health and even their lives. This seemed inevitable. A generation ago the prospects were that it would go on forever. Today we have an automatic machine for producing electric-light bulbs which has a capacity of over 150,000 bulbs in 24 hours. Each machine did away with the work of 994 men. The labor cost of producing these bulbs dropped from $13 a thousand to less than $.50 a thousand.

Another machine for making tumblers, such as are used in soda fountains, does the work of 80 men. Until 1919 glass tubing was manufactured extensively by hand, but in that year an automatic machine was invented that removed all need for hand labor in the production of glass tubing. The output of this machine is more each minute than a hand worker could produce in a day. By 1928 in another depart-

ment of the glass industry an automatic machine was capable of turning out no fewer than 7200 articles an hour, eliminating all the skilled and unskilled laborers. So it is in department after department of the glass industry.

Shoe Factories. If we pass to the development of automatic machinery for shoes, we find much the same story. Between 1850 and 1900 no fewer than 4000 patents were issued to the shoe industry. These inventions reduced the labor cost of a pair of shoes from over $4 (which it had been under the handwork system) to about 35¢. Gradually process after process that people believed would always remain handwork passed to the machine.

We are further told that one machine does in one minute what it formerly took a man with a hammer an hour and a half to perform. This interesting comment is made upon cost: With a Goodyear machine in the factories, the cost of welting, which by the hand method had ranged from 60¢ to 75¢ a pair, was reduced at first to 10¢ a pair and later to 4¢ a pair.

The Automatic Telephone. An example of the automatic machine that probably comes much nearer home to most readers is the automatic or dial telephone. Who in America has not heard of this marvel which is able to pick out one connection from hundreds of thousands of others? It seems beyond the range of mechanical possibility that by turning a telephone dial to a few numbers one can automatically make the connection desired and neglect the hundreds of thousands of other possible connections. Fifty years ago if someone had even suggested such a possibility, he probably would have been locked up as a dangerous character. If we had no other illustration before us, this one

automatic machine should make us carefully ponder future developments.

The Automatic Steel Mill. Another example of an industry that is fast moving toward a highly mechanized condition is the steel industry. This would surprise many who have considered steel mills as places of eternal slavery of human beings who have been degraded almost beyond recognition by their arduous labor. Today, one entering a really modern steel mill would be struck by its loneliness. In place of the many men we were accustomed to see toiling in the heat of the furnaces, there would be but a few operators. Here and there sitting comfortably on a high platform are engineers who by merely moving a few levers control every stage from the white-hot ingot to the finished structural shape.

Automatic Power Station. In New York State an electric-railway system is supplied with power through five substations. Each one of these substations is automatic in operation. It carries on its intricate functions without need of human help. Should an emergency arise, signals are flashed to a central control station where an operator thus informed of the trouble presses some buttons and takes individual charge of the situation until the unusual condition has passed.

Automatic Electrical Machinery. Many other phases of the production of electricity have become almost automatic. A new type of plant has been built to produce electricity by wind power. The report on the first plant is encouraging; it seems possible that some day wind may be producing much of our electricity more or less automatically.

The automatic eye and ear are becoming increasingly important. Sometimes the electric eye counts the number of

people or automobiles that enter a particular place. The electric eye can sort out objects by color. It will notice differences that no human eye can detect. New rays invisible to the human eye but readily detected by the electric eye are being installed to guard vaults and valuable property. When one walks through such rays, bells ring, lights are turned on, and even machine guns can be discharged. There are those who think that the days of watchmen are over. A few years ago it was impossible to conceive that there could ever be such devices.

A new device has recently been installed on automobiles by which it is possible to unlock the garage door without getting out of the car. Turning a switch on the dashboard of the automobile controls electrical impulses that operate the lock on the door. Other gates and doors are controlled by sounds and horns. We have all seen the traffic lights that shift automatically when the automobile runs over a steel plate several yards from the light.

Thinking Machines. The human mind itself has not been exempt from the inroads of the machine which acts as a substitute for it in limited fields. We are told of experiments made by robot chemists. A robot chemist with an electrical eye, radio brainlike control, and magnetic hands operated without human supervision in an improvised laboratory before members of a New York electrical society.

A machine that will control other machines has recently been invented. It was made primarily to control and direct certain calculating machines. But it can be applied to the direction and control of airplanes and the steering of ships, the operation of many kinds of recording instruments, and the automatic control of many industrial processes.

A new calculating machine is designed to perform in a few minutes the work that would absorb the efforts of a man for a lifetime. Many mathematicians have long desired to know which numbers were prime numbers. This is a number which can be divided only by itself and by one. Is the number 88,114,244,437 such a number? It is easy to see that the effort to divide this number by every possible number would take some time. The effort to divide such a number as 170,141,183,460,469,231,731,687,303,715,884,105,727 by all other numbers might well take a lifetime. This new machine will deal with such numbers in a few minutes. The machine works while men merely look on.

Most remarkable is a new machine described by *The Scientific American*. It is called a *thinking machine* because it is able to change the operation of many other machines depending upon which of several events happens. If one particular thing happens, the thinking machine takes control and operates the other machines in one fashion. If something different happens, the thinking machine operates the other machines to allow for this difference. It seems that no field of human activity is safe from the inroads of the automatic machine.

The Machine in Agriculture. The field of agriculture has not been immune to these influences. Changes have occurred here as in other fields. It is estimated that from 1919 to 1927 four million persons quit farming in the United States. Nineteen million acres went out of cultivation; yet agricultural production increased 25 per cent. The tractor can plow four to eight times as many acres a day as can the two-horse team. We are told of a new adjustment on the tractor that will enable it to plow all through the night with-

out anyone being with it. The farmer can now raise a bushel of wheat with ten minutes' work with modern machinery. Once it took three hours. He can cultivate from three to six times as much corn and harvest five times as much as by former methods. Once, the average farm worker could handle only twelve acres; now he handles fifty; it is no longer unusual for one man to take care of one hundred acres of corn or three hundred acres of wheat.

Automatic Textile Machinery. Another whole section of industry is likely soon to feel once more the force of changing inventions. Textile machinery for the past 150 years has played a dramatic part in the rise of the industrial West. Certainly this was one of the two or three key industries that led to the rapid industrial expansion of England in the late eighteenth and early nineteenth centuries. People in that day probably thought that an approach to the ultimate machine age was rapidly being made in the textile industry. We have passed from one stage to another with such startling rapidity in the past one hundred years that it is hard now to picture the crude beginnings. Just as it is difficult for us today to conceive of using the hand loom on any large scale, so a generation from now it may be difficult to conceive of using a loom which one man has to watch continually. Already we hear reports of the automatic loom where only an occasional inspection is required. Threads may break; the machine stops itself, mends the break, and starts again. One operator inspects a dozen, a score, fifty, or even one hundred looms. The Department of Commerce has estimated that one individual with a modern power loom can produce as much cloth in a day as was formerly produced by 30,000 people with hand looms.

Whether we have any such sensational shift in the future is perhaps of minor significance; because if today one man can watch 50 to 100 looms, it would make relatively little difference in the total employment whether he watched 150 or 200. The number will be so reduced in any case that it will require drastic change in the social order to provide opportunity for work for everyone.

If a plant had 1000 looms and 1000 men watching them, and over a period of years substituted new looms, where one man tended 100 looms, the plant would come to employ only 10 men for the purpose. If the plant has already discharged 990 men, whether it discharges five or even nine more is a relatively unimportant question.

Other Automatic Machinery. If one should go into the boiler room of a really modern ship, one would find, instead of a hundred grimy stokers continuously heaving coal into the fire, a few engineers whose physical exertion is largely confined to reading meters and turning valves.

The magazine, *Science*, describes an automatic process as follows: "Automatically and continuously, one of the many chemical exhibits at the Chicago World's Fair is making gunpowder by mixing carbon, sulphur, and niter and then exploding it before the eyes of the visitors by dropping it on a hot plate."

There has been much discussion recently of various machines for writing messages in one place and having them appear written out somewhere else many miles away. With one of these machines a person may be operating a typewriter in Philadelphia while the message is reproduced automatically on another typewriter in New York. These machines use telephone and telegraph wires to transmit the

messages. A new device, we are told, dispenses with the wires.

A century ago one would have said that the digging of ditches would be done by hand as long as time lasted. Even now it is frequently said that we should not educate all of the people because laborers must always be at hand to dig the ditches. Such a remark clearly shows the failure of some of us to grasp the possibility of the modern mechanical world. Anyone who has stopped along the side of a road on the plains of the Middle West to watch a giant machine shovel ton after ton of earth from a ditch will appreciate the revolution that has occurred. Not so many years ago there would have been backbreaking work here for scores of men, but now a handful of operators easily perform the task.

The Irish immigrant of an earlier generation would be startled beyond words if he could see the mechanism that does the job at which he started his career. The tamping of ties on the railroad is no longer reserved as the exclusive work of the newly arrived Italian immigrant. Even the Negro of the South is beginning to feel the competition of the machine with his cheap labor.

So it goes in all fields. From street cleaning to pie wrapping, from pottery making to road laying, the machine is taking over the tasks of men. Even in the field of warfare we have ships that steer and sail automatically, airplanes that fly without direct human control, and guns which are set, aimed, and fired by machinery that gives due regard to such complicated factors as wind velocity, density of atmosphere, and motion of the target.

Wherever we turn in the economic order, such changes are taking place or else can be brought about if attempted. Few

people realize the vast change that is occurring in the character of industry itself. Indeed, the single-function machine, as such, is beginning to disappear, and in its place a new type of automatically controlled *production unit* is becoming characteristic of the modern power era.

A leading engineer, in tracing the development of automatic machinery, calls the automatic production unit a new and portentous phenomenon in industry. With this new method of production a single machine is a whole factory; there are practically no laborers at all. Raw materials are mechanically injected into one end of the machine and finished products are mechanically loaded on freight cars at the other end. A few expert mechanics and engineers keep an eye on the proceeding, but the human hand has no work to do except to turn a regulating dial once in a while. This continuous process method has been developing slowly ever since the introduction of the alternating current twenty years ago. Since 1929 it has been spreading rapidly from one industry to another.

II. Some Opinions on Productive Capacity

How Much Could the Automatic Machine Produce? It seems to make little difference from what viewpoint one looks at our productive system; the automatic machine either has been invented or seems to be just around the corner. If the machine is not completely automatic, the saving in the number of people needed has been so great that the resulting displacement of men is much the same as though it were quite automatic. What does all this automatic machinery mean in the way of increased production? What can be done to enable this new machinery to increase eco-

nomic welfare? A most important need for the American public today is an appreciation of the productive capacity of modern industry. If all citizens clearly understood the almost incredible capacity of our industrial order, steps would soon be taken to enable it to produce for economic welfare. A properly planned social organization is the only thing needed to assure a satisfactory standard of living for everyone. If the American people realized this, a demand would arise that such social organization be developed.

There seems to be almost unanimous agreement on the part of competent authorities that if our economic resources were efficiently operated, the present output could be produced in a two-day or three-day week of four-hour or five-hour days. If an increase of goods were desired, it could be brought about, not only with no increase, but with an actual decrease in the length of the present working day, week, year, or lifetime.

Our idea of Utopia only a generation or two ago was a world in which the entire population had much leisure and no one had to work long hours. Even in the latter half of the nineteenth century Edward Bellamy, in describing such a world, discussed what might happen in the dim indefinite ages beyond, but certainly nothing practicable in our time. In spite of the fact that he was discussing the year 2000 in his imagination, most people probably assumed it was more likely the year 10,000. We undoubtedly could have today all the things he thought of and many more of which he did not even dream. We are not realizing these blessings now in America because our people, ignorant of their possibilities, do not insist upon them.

The question might well arise here: How much could the

present industrial order produce if it were running at maximum capacity? We find an almost unanimous answer whether we turn to economists, engineers, sociologists, or other students of present economic problems who are in a position to know. The answer is: certainly enough to abolish want, poverty, and privation from the world forever.

Dr. Wesley Mitchell, one of the leading economists of the country, in addressing the American Society of Mechanical Engineers, quoted with approval Mr. R. E. Flanders, a distinguished engineer, to the effect that we have the resources, the equipment, and the technical ability to smother the population with an avalanche of necessities and luxuries such as no Utopian dreamer in his busiest slumbers ever dreamed of.

Fred Henderson thinks that if you imagine this to be merely a change in the technique of production, you will utterly fail to grasp the significance of what is the profoundest change that has ever taken place in the economy of human living. For what it means is nothing less than this: that so far as production is concerned, the problem of poverty is solved for mankind.

A committee of the Society of Industrial Engineers states: "If we take an arithmetic average of the most efficient and least efficient groups given, we find that productivity could be increased 80 times, using existing technological and managerial means. This would mean that instead of 32,000,000 workers ordinarily employed we could satisfy all the demand for goods with only 400,000 workers except in agriculture and trade."

Paul Nystrom, an outstanding economist, estimates that

actual production can be doubled almost immediately. Charles A. Beard says that there can be plenty for all and that there can be more for all with less than the minimum work needed to keep a man in good mental and physical condition. In his recent book, *Toward Civilization*, we find the following statement: [1] "Nor has the climax been reached, or perhaps even imagined. Engineers agree that production is only half efficient with present equipment, with undreamed-of gains still to come from invention and research. With incentive our agricultural output could easily be doubled, or even quadrupled. So far as science and engineering are concerned, we could readily produce an abundance for our entire population, enough to remove all economic need for the labor of adolescents and the aged. Few realize how close to our reach is the abolition of poverty: The problem in the way is one of reorganizing distribution and the use of capital."

W. E. Wickenden, President of the Case School of Applied Science, one of the men most competent to form an opinion, estimates that total production in the United States can be increased from two to four times. Thomas D. Campbell, formerly the operator of one of the largest farms in the United States, estimates that agricultural production could be doubled almost immediately. J. A. Hobson, one of the important English economists, has stated that recent improvements of the technical organization of industry have made it possible to produce with the present quantity of human effort an enormously greater quantity of most of the goods and services required for human consumption. This applies not only to manufactured goods and the ma-

[1] BEARD, CHARLES A.—*Toward Civilization.* Longmans.

chines used in the manufacturing processes but to mining and many sorts of agriculture.

Henry Ford recently said, "I believe every man could double his output if he tried, the one condition being that he use intelligence in selecting his method of operation."

In *Prosperity, Fact or Myth* * Stuart Chase says, "It is impossible to exaggerate what the technique of mass production, properly controlled, might mean to material civilization."

A. B. Donham, Dean of the Harvard School of Business Administration, says, "Science has set the stage for a greater material advance than the mind of man has ever dreamed."

Sir Arthur Salter, formerly a high official of the League of Nations, says, "For never until now have the nations' resources and man's knowledge and skill been sufficient to give the material basis of a rich civilization to the whole of the world's inhabitants."

The late Simon Patten saw this great possibility of production and said that those who predicted tomorrow's states from a study of the past overlooked the difference between a society struggling to meet a deficit and one so well situated that thought can be centered on the equitable distribution of a surplus.

Thorstein Veblen, one of our keenest economic critics, was convinced that if productive industry were organized as a systematic whole and managed by competent technicians with the aim of maximizing production of goods and services, the resulting output of goods and services would exceed the current output by several hundred per cent.

Engineers agree that we have a far greater productive capacity than has ever been used. Economists state that

* Albert and Charles Boni, Inc., Publishers, N. Y.

we could abolish poverty and physical privation. The opinion of these technical groups should carry great weight. It is of importance to note that the people who have knowledge of human relations, such as psychologists and publicists, agree with them. William McDougall, a well-known psychologist, believes that there would be an enormous abundance of everything if man's technical power to produce were made use of and put at the disposal of all; if the machinery of production could be set working at full speed, every human being might be in luxury of the most elaborate kind at the cost of a moderate expenditure of energy.

Nicholas Murray Butler is on record, stating that the world is rich enough for better schools and systems of education, better conditions of labor and larger remuneration for the wage worker, better protection of the public health, better housing for the masses of the people, better libraries and museums, and in general, a raising everywhere of the level of life and its conditions.

A recent report of the American Federation of Labor said: "So great is the potential productive capacity of the country because of the vast use of power, and new machinery, that if the manufacturing establishments of the nation were to operate at full capacity four hours a day, the total volume of production would be greater than at present."

It has been estimated that when wheat was harvested with a sickle and threshed with a flail, from 35 to 50 hours of labor were required for harvesting and threshing an acre with a yield of fifteen bushels. The introduction of the cradle saved about ten hours per acre. At present farmers on the Great Plains use from four to five hours in harvesting an acre of wheat with a binder and threshing from the

shock with a stationary thresher; from three to four hours when the crop is harvested with a header and threshed with a stationary thresher; and an average of three fourths of an hour when the combined harvester-thresher is used.

Such statements could be reproduced indefinitely. It would be possible to go into most of the important industries and to show that they can enormously increase their output. Many of them could increase production greatly with existing plants. It would be relatively simple to change many of the plants by installing or developing new machinery that would further increase production. Inability to produce does not seem to be a major economic problem of the world at the present time.

III. Summary

The automatic machine has appeared in industry after industry. Plants that formerly employed thousands of men now operate with hundreds and turn out a larger product. In industry after industry it would be possible to produce enough for everyone, and in a few cases perhaps as much could be produced as would be consumed even though the product were given away. Engineers, economists, authorities in many other fields say that the problem of production has been solved, that we could produce enough. Does not this mean increased leisure as well as ample material products for all? Does it not mean that one of mankind's chief goals is nearly reached? In short, do not the utterings of the early Utopian dreamers shrink to insignificance when compared with the magnificent possibilities of the present day which await only the touch of increased knowledge to turn them into realities.

Much of the rest of this book will be devoted to looking for the answer to this question: "With this great productive capacity why do we not produce enough?" It is just here that education should realize its tremendous responsibility in bringing about a new attitude. The curriculum of public education must be largely built around these new problems.

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CHAPTER II

HOW MUCH OF OUR PRODUCTIVE CAPACITY DO WE USE?

A review of Chapter I would lead one to think that we had truly reached a magnificent stage of civilization. The reader has seen with his own eyes phenomena which point to the conclusion that poverty and want of material goods are things that human beings have no longer to fear. Should he not have full faith in what he sees, the opinions of many experts have been given to reinforce his conclusions. But now let us see what these promises of plenty actually mean to the people of this country by measuring their ability to command the material goods necessary to a good life. The best measure of such ability is the size of the incomes of the individuals who make up our population.

The incomes of different people in the United States in a typical year vary all the way from actual losses on the part of a considerable number of people to incomes of five million dollars or more. One cannot but be struck by this tremendous range of income. Why does one person make $300 a year and another $50,000? Many explanations have been given. Some of them sound reasonable. Most of them are merely attempts to justify things as they are. One of the important tasks confronting the American people is the consideration of the factors causing these differences in income and the determination of whether or not the differences are fully justified in terms of social service.

Average Income. If during the year 1929 the total income of the United States had been equally divided among all of the people, each person would have received approximately $750. This, of course, applies to all men, women, and children. If the total income had been equally divided among all the people gainfully employed, the average amount received would have been somewhat in excess of $1900.

Under no system of economic organization could the entire income of a country be distributed. Part of it would have to be spent for the improvement of old manufacturing plants and the building of new ones, regardless of whether capitalism or communism or any system between these extremes were in operation. It is probable that in Russia during 1932, the per cent of the total production going to the people was lower than in any other comparable country. This simply means that the rate of saving was higher. It is impossible to spend all of the same income for both capital improvement and for the consumption of goods.

These average figures which have been quoted are, of course, entirely theoretical and give very slight indication of the actual distribution of income. They are based upon a great many small incomes and a few large ones. It should also be kept in mind that the level of income in the United States in 1929 was probably higher than it had ever been before in any country in the world.

Total Income. The total income of the people of the United States has been estimated as shown in Table I.

In this table it is the second column of figures that interests us the more. It shows the gradual increase in income as measured in dollars after changes caused by fluctuations in the value of the dollar itself had been eliminated. From

TABLE I—AMOUNT OF GROSS INCOME IN THE UNITED STATES FOR CERTAIN YEARS FROM 1910 TO 1932

Year	Gross Amount of Income in Billions of Dollars [1]	Adjusted Income [2] in Billions of Dollars
1910	31	47
1920	73	48
1926	85	85
1928	89	92
1932	40	54

1910 to 1920 the unadjusted dollar increase is misleading in its indication of a tremendous increase in real income. The major part of this apparent increase, however, is due to a decrease in the value of the dollar. The actual increase in commodities and services produced was not large, as is indicated by the adjusted figure for this period. The increase in actual income from 1920 to 1926 was even greater than the apparent increase because prices were actually lower in 1926 than they were in 1920. By 1932 actual income had decreased to a very great extent, but there was an appreciably greater amount of goods and services available to the people of the United States that year than there was in 1920.

Incomes of Various Groups. We have seen that in a prosperous year the average per capita income was about $750 while the average income of all those gainfully employed was approximately $1900. Dividing those gainfully employed into two groups, wage earners and salary earners,[3]

[1] All estimates except for 1932 are from the National Bureau of Economic Research.

[2] Base year 1926.

[3] As used here, the term, salary earners, means those who have an agreement for a fairly long period at a definite salary. Wage earners are those who are employed by the day or the week at a definite wage. The distinction is not rigidly accurate.

we find that the former earn an average of $1200 per year while the latter earn an average of about $2100 per year.

Breaking earners up into smaller industrial groups, we find that the following are representative yearly averages: agriculture, slightly over $600; merchandise, $1300; mining,

TABLE II—SUMMARY OF LIFE EARNINGS
In Some Occupations in the United States [1]

Occupations	Present Value of Average Life Earnings	Average Annual Earnings from 1920 to 1930	Limit within Which True Figure Probably Lies
Medicine	$117,000	$5250	±20%
Law	117,000	5250	±40%
Engineering (professional)	108,000	5000	±20%
Architecture	108,000	5000	±30%
Dentistry	108,000	4725	±30%
College teaching	74,000	3260	±10%
Social work	57,000	1517 *	±15%
Ministry	46,000	2220	± 5%
Library work	44,000	2250	±35%
Journalism	43,000	2250	±50%
Skilled trades	34,000	1700	±15%
Public-school teaching	30,000	1360 *	± 5%
Nursing	28,000	1570	±10%
Unskilled labor	18,000	945	±20%
Farming	14,000	650	±15%

* Median.

$1300; manufacturing, $1300; unclassified industries, $1400; transportation and public utilities, $1500; construction, $1500; government, $1500; banking, $2100.

Table II relates to the average earnings of various specific occupations. The estimates are based upon average conditions as they existed from 1920 to 1930. Certain of the professions are seen to be fairly well paid. However, the

[1] Clark, Harold F.—*Life Earnings in Some Occupations.* Teachers College.

number of well-paid people in all of the professions would total only a few hundred thousand. The average income in the skilled trades was about $1700 per year. The number of people in the skilled trades is many times the number in the highly paid professions, being approximately 7,000,000.

Some occupations that are classified as professions reveal lower incomes than the average in the skilled trades. Nursing, for instance, has an average income of about $1400. Public-school teaching (by far the largest of the professional groups, including approximately 1,000,000 people) reveals an average income of about $1300. The average wage in unskilled labor was about $900. This group includes 10 or 12 million people. The lowest income of any large occupational group is found in farming. There the average income approximates $650.

The second column of Table II gives the present value of average life earnings. If we add up the total earnings of the average person in medicine, the sum would amount to $267,000. But most of this money would not be earned by the individual until many years after he had started to work. In unskilled labor, however, a person could begin to earn money almost immediately after entering the occupation. In unskilled labor one earns almost as much at the beginning as he ever earns.

Two occupations might have exactly the same total income during the working life of two different workers. In one occupation most of the money might be made in the early years. In the other, most of it might be made toward the end of one's life. In spite of the fact that these two occupations produced the same total of earnings, the value of the income of the first would exceed the value of the

income of the second. If one person received $1000 more than another during the first year he worked and left this $1000 on interest for forty years, the interest would amount to much more than the original sum. In other words, if a worker in one occupation receives his money in early years and another one in late years, there is an income difference between the two occupations even though the total amounts of money earned are identical.

The reason for calculating the present value of life earnings is to correct this difficulty. If you are destined to make $1000 forty years from now, the money has a certain value today. Its value is the amount which, put at compound interest today, would equal $1000 forty years from now.

The last column of the table gives an estimate of the amount of error there may be in the calculations of income. As you have undoubtedly already observed, all such figures as these estimates of income are approximations. The figures for medicine, for instance, are not based upon the actual income of all the doctors in the United States. They are based upon the earnings of various groups of doctors. If some other groups were studied, slightly different results would be obtained. If all the doctors in the United States reported their incomes accurately, the true figure might be as much as 20 per cent more or 20 per cent less than the figure we have given. In the case of public-school teachers the margin of error is exceedingly small. If we had their true income, it would almost certainly not vary more than 5 per cent from the figure we have given. This is because information regarding the actual salaries paid to practically all public-school teachers is available. The true figure for

journalism, on the other hand, might be as much as 50 per cent higher or lower than the figure given in Table II.

Table III gives the average annual earnings in all industries including farm labor. The average earnings in 1890 were $438. This had increased very slightly by 1900. Between 1900 and 1910 there was a substantial gain. The next decade showed a great increase in the dollar income, aver-

TABLE III—AVERAGE ANNUAL EARNINGS [1]

All Industries Including Farm Labor

Year	Average Annual Earnings (in dollars)	Adjusted Dollar Earnings (1914 base)	Real Earnings (1914 = 100) (in terms of the ratio of each year's average to the average earnings of 1914)
1890	438	588	96
1900	454	595	97
1910	573	619	101
1920	1337	650	106
1926	1284	742	121

age earnings rising from $573 to $1337. Between 1920 and 1926 there was an actual decrease in the average earnings in dollars. Earnings in terms of purchasing power did not follow the same trend as dollar earnings. As the table shows, from 1890 to 1900 real earnings increased from 96 to 97. During the next ten years they moved up to 101. The decade which showed the great increase in dollar income showed very slight increase in real earnings. This means that prices rose almost as fast as did dollar wages. The period from 1920 to 1926 saw the great increase in real earnings. The index moved up from 106 to 121. It is interesting to recall that the dollar wage actually declined during this period.

[1] Douglas, Paul.—*Real Wages in the United States*, 1890–1926, p. 391.

Table IV gives the average annual earnings from 1890 to 1926 for certain occupational groups. During this period average annual earnings of wage earners in manufacturing increased from $439 to $1309. Average annual earnings of government employees in executive departments increased from $1033 to $1809 between 1900 and 1926. The salaries of teachers increased from $256 to $1277 and of ministers

TABLE IV—AVERAGE ANNUAL EARNINGS IN DOLLARS [1]

Year	Wage Earners—Manufacturing	Government Employees—Executive Department	Teachers	Ministers	Farm Labor
1890	439	—	256	794	233
1900	435	1033	328	731	247
1910	558	1108	492	802	336
1920	1358	1648	936	1428	810
1926	1309	1809	1277	1826	593

from $794 to $1826. The income of farm laborers increased from $233 to $593. It can be seen readily that the earnings in these occupations increased at very different rates. Wage earners in manufacturing were receiving almost three times as much at the end of the period as at the beginning. Teachers were receiving about five times as much, ministers less than two and a half times as much. Farm labor showed a very great increase from 1890 to 1920, but a great loss between 1920 and 1926. These figures are all in dollars and would have to be corrected for changes in purchasing power before we would know what they would mean in real wages.

Distribution of Personal Incomes. Perhaps even more striking than the figures revealing the generally low income

[1] Douglas, Paul.—*Real Wages in the United States*, 1890–1926, p. 393.

level for most occupational groups are those which show the enormous differences among individual incomes. There are perhaps 10,000 individuals receiving more than $100,000 a year and perhaps 5,000,000 receiving considerably less than $1000, in an ordinarily prosperous year. Table V gives the detailed figures on income distribution.

TABLE V—DISTRIBUTION OF PERSONAL INCOMES IN 1927 [1]

Income Class (dollars)	Number of Earners	Per Cent of Total Number	Per Cent of Total Income Received by Each Group
0–1,000	8,153,100	15.8	7
1,001–5,000	38,287,727	81.7	77
5,001–100,000	1,147,845	2.398	13
100,001–1,000,000	9,331	.0215	2
over 1,000,000	207	.005	1

In 1928, according to the Bureau of Internal Revenue, 209 people paid Federal income taxes on incomes of $1,000,000 or over. There were 11 people who had incomes of more than $5,000,000 each.

Income Due to Ownership. Approximately one third of the total income produced in the United States goes to the people who own the wealth of the country. About two thirds goes to pay those who have worked, either for wages or for salaries. We have already seen something of the unequal distribution of income in the United States. The distribution of wealth is far more unequal than that of income. According to some estimates 2 per cent of the population own 50 per cent of the wealth and 50 per cent of the population own but a little more than 2 per cent of the wealth. The ownership of wealth within itself might not be a matter of

[1] N. E. A. *Research Bulletin*, Vol. 5, No. 3, pp. 146.

vital consideration if it did not affect the distribution of income. Because of the fact that about one third of the total income goes to people who own the wealth of the country, this ownership profoundly affects the distribution of income.

Some Low Wages. We have seen that a very considerable portion of the national income goes to a small group of people who have large incomes. These incomes are not at all typical of industry as a whole. Some of the very low wages are even more startling than some of the large incomes. The following wages are no more typical of industry as a whole than are the large incomes. It is important to remember, however, that there are hundreds of thousands or even millions of people who have unbelievably low earnings of the order of those reported in the following few paragraphs.

A report of the Department of Labor in 1933 on the shirt industry disclosed some very low wages. "Of the 18,378 women workers studied in nine states 35 per cent earned less than $6 a week." "Machine operators averaged $7.37. Others averaged as low as $6.60." A special study was made of earnings in fourteen plants. In these plants "of 2,824 workers there were 24 who earned less than 5 cents an hour." Other studies have shown earnings as low as $2 or $3 a week in certain parts of the textile industry. A recent study of several candy factories disclosed entire departments where the wage was under $4 a week.

In 1932 some well-known stores in the larger cities were paying many of their saleswomen as little as $6 a week. The United States Government pays many of its employees very low wages. Its payroll for 1931 showed slightly more than

1,000,000 people. Thirty-five per cent of these received less than $1000 per year. Over 50 per cent received less than $1500.

If one wishes to find really low wages, some of the agricultural districts will provide the opportunity. The year 1927 was a fairly good year for agriculture compared with recent years. The agricultural department of one of the universities in North Carolina made a study of farm incomes of that year. Based upon a survey of a sample of the farms in the state, it was estimated that if the cash farm incomes were equally divided among all the farmers it would give them $270 apiece. This is the amount each farmer would have for living expenses for a year after paying for fertilizer, feed, seed, hired labor, repairs, tools, taxes, and other cash farm expenses.

Other estimates by some of the state agricultural colleges show that if the farmer had paid himself the average rate of wages there would have been no return left beyond this. The Bureau of Agricultural Economics of the Department of Agriculture makes estimates of the wages paid to farm labor. In July of the boom year of 1929 the average wage per day, without board, for farm labor was $2.43. In some sections of the country this average was as low as $1.70. This wage had dropped so much that by 1932 the estimate was as low as 60 cents for an entire state. It was also estimated that many thousands of people were working on farms without receiving any money wage at all. They were working for their board and clothes. These conditions, of course, are exceptional. They show clearly, however, that hundreds of thousands and at times even millions of people have to exist on incomes of less than $200 or $300 a year.

A few years ago the author made a study [1] of the total income of every inhabitant of a township of one of our agricultural states. It was a year of ordinary prosperity and yet the *per capita* cash income was less than $35 for a year. This had to buy everything these people bought for their own use—all their clothing, all the food which they bought, all their books and magazines, all their health service, and everything else. Obviously, this means a very low standard of living.

Conclusions. This brief survey of what the people of this country actually earn indicates very clearly, we think, that the great majority of our population are not able to command an amount of material goods and services sufficient to a good life. For this majority the promise of plenty given in Chapter I is in the actual present an empty promise.

We do not wish to enter into any lengthy philosophical discussion of what constitutes a good life. As we use it, the adjective *good* has no moral connotations. While we do not deny that the best part of life is intellectual life, we do state categorically that sufficient material goods of a general similarity to those sought after by man in his present economic activities are an absolute prerequisite to a satisfactory life of any but the most spiritual sort. We have no quarrel with any person who wishes to live the life of a Saint Simeon Stylites. We merely state our belief that an ascetic life is not that which the vast majority of human beings seek to lead or consider best.

We have the further difficulty of determining what is a minimum of material goods necessary to a good life. Here again a great deal of effort might be spent in fruitless dis-

[1] Clark, Harold F., in *American School Board Journal*, August, 1927, p. 69.

cussion. As before we shall set forth an unsupported opinion in the belief that few critics will take exception to it. We believe that in the present stage of civilization the minimum in terms of money is from $2000 to $5000 yearly for each wage earner depending upon his social condition.

It is in terms such as this chapter presents, then, that we find the promise of Chapter I an empty mockery for most of our population.

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CHAPTER III

CAUSES OF DIFFERENCES IN WAGES

The Popular American Theory of Wages. What causes differences in wages? We are told by many that such differences are a part of the natural order of human events and thus cannot be changed. There has been a distinguished and very influential body of economic opinion in this country supporting the position that the distribution of income which now exists tends to be the proper distribution. This argument was clearly advanced in England by Adam Smith; from a theoretical standpoint there is much to be said in favor of it. It rests, however, upon certain assumptions regarding the economic order which have never been fulfilled. Before the theoretical argument can be used to justify actual conditions, these assumptions upon which it rests must be validated.

The argument in general states that, under a system of perfect competition where there are freedom of opportunity and no barriers to occupations or to industries, labor will move from one industry to another as wages change. If, for example, wages were 50¢ in one industry and $1 in another, labor would move from the former to the latter until the wages in both were approximately equal. Under this system wages would tend to be equal in all branches of industry, any differences being accounted for by differences in the desirability of the different types of work and in the demands upon the natural ability of the individual.

The assumptions of perfect competition, of freedom of opportunity, and no barriers to occupations or to industries constitute the heart of the theory. These assumptions have not been fulfilled in the United States; as a result little or nothing can be said of the practical applications that have been made of the theory here.

We should like to point out that in this country a large share of the differences in wages is due not to competition but to lack of competition, that is, to monopoly advantage and privilege in one form or another. If you can become a bricklayer in a community where bricklayers are sufficiently well organized to limit their number, you can earn perhaps $3000 a year when just as able men are working for $1500 in other occupations. If you happen to be born into a family that is sufficiently wealthy to send you through medical school, you may be able to make $7000 a year when people of equal ability are working for $4000 a year in other occupations. If you happen to be born into a family that leaves you a flourishing industrial establishment, you may have an annual income of $100,000 a year when people of the same ability in the community are working for $5000 a year. We would insist emphatically that most of the differences in income in the United States are due to monopoly privilege or to specially privileged advantage in one form or another. In short, the basic assumptions upon which Adam Smith's theory of wages rests are nonoperative in this country.

To those who would argue from a different position we would suggest that there is just one test: That is to eliminate or greatly reduce artificial and monopolistic advantages and see what the distribution of income then becomes. The wages of an individual are determined largely by the same

process that determines the price of any commodity or service. The demand for the service in relation to the supply offered will set the price at which the exchange is made. If any kind of control limits the supply, the price will be advanced accordingly.

Can We Control Wages? The discussion at this point is simply a plea that in the United States we live up to the theory which we profess. We are fond of saying that competition determines price. We have failed to look at the conditions to see whether effective competition can prevail. As far as industrial organization is concerned, we shall have something to say later regarding an alternative plan to competition. At least the very minimum that could be done would be to see that the conditions of perfect competition (free opportunity and no barriers) exist in regard to occupations. This would go far toward removing some of the worst of the present differences in earned income. Whether it would go as far as is necessary toward bringing about correct occupational distribution becomes another question to be discussed in the chapter dealing with occupations.

Why Small Numbers? It has been very common for even the economist to talk as though the great utility of a particular service performed by an individual justified a high wage. It has been a particularly popular line of argument in regard to long and extensive schooling. It has been commonly stated that elaborate training did and should increase the wages a person received. Lionel D. Edie [1] was far nearer the truth when he said: "Educated labor does not receive relatively high wages because it is educated, but because there is a scarcity of educated workmen."

[1] *Economics: Principles and Problems.* Crowell.

It is to the interest of a group to see that there is a scarcity of workmen in its particular field. This fact has been recognized by many trade unions and professional groups even though their theories may be otherwise. Many groups have advocated higher standards of training, honestly believing that their only motive was that these higher standards were desirable in themselves. The real effect, many times not understood by the persons themselves, has been to cause this limitation of numbers. Most groups in the United States could be increased in size without lowering the average level of ability or of training in the group. Such an increase in a great many cases would greatly enhance the total welfare of society. It would not increase the welfare of the particular group concerned. The conflict between these two factors—the welfare of the particular group and the welfare of society—is almost certain to become one of the crucial conflicts of the coming generation. It is the duty of the public schools and of public-school teachers everywhere to help to develop a rational plan to avoid this conflict and to adjust numbers so that wages will be fair in all occupations.

Schools May Lower Wages. Since wages in different occupations are largely determined by numbers, it follows that schools will have a tendency to lower the higher wages. This situation was graphically expressed by one distinguished economist when he said: "When doctors of philosophy are plenty they may command no more per year than the football coach." The same amazing statement in even stronger form is made by Professor Irving Fisher. He says: "It is true that a scarcity of trained workmen of any particular sort, such as electricians' assistants, well trained, will keep their particular wages high; that a greater abundance of such

workmen as would result from trade schools would reduce their wages. . . ." More trained people in this field might, however, improve the general average for all because it might increase the total productivity of society.

Since a greater abundance of trained workmen which would result from trade schools might actually lower wages, steps must be taken not only to prevent this but to prevent individual groups from instituting monopoly control over their occupational fields to the detriment of society as a whole. This means, of course, substituting some plan for determining the number of people in each occupation to replace the operation of mere chance. At the present time the fortunate individual gets into the protected group and is thereby able to exploit the rest of the population. The unfortunate individual, in many cases through no fault of his own, is denied opportunities of education, of business, or of wealth. The result is that there are millions of people in the field of unskilled labor and other similar groups making relatively low wages who could be transferred to more highly paid occupational groups. Such a transfer would increase the total income of the country as well as the income of these individuals.

Schools May Increase General Economic Welfare. It is imperative that we see the relation of numbers to wages. Professor T. N. Carver reminds us that the wages of any particular kind of labor depend as much upon its supply as upon its demand. Labor, like all other factors, must be limited in supply in order to command a price. Control of this limitation is one of the most vital elements of control in the present world. With this control in the hands of irresponsible groups it is no more possible to have economic free-

dom than it is possible to have political freedom when one's political status is in the control of irresponsible groups.

The only way in which the existing divergencies between the rates of wages or salaries paid in different occupations can be permanently reduced is by increasing mobility. Mobility is increased by education and by reducing the financial barriers to professions and artificial barriers of other kinds to many of the skilled crafts. Finally, it is well to remember that the correct diffusion of training would greatly increase the productive power of the community as well as lessen differences in individual earnings. Removing the barriers to occupations is simply living up to the theory of equal opportunity which we have claimed as the American inheritance. If we really want the largest possible income for the entire country, there is no alternative other than to provide such education and training as will remove as far as practicable all artificial barriers to occupational mobility. From what we saw of the immense productive possibilities in Chapter I, it becomes apparent that if we realize the largest possible income for the entire country, there will be plenty for everybody. To seek this is a particular obligation of the schools.

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CHAPTER IV

THE ODD NATURE OF VALUE

Too Much of Many Things. The amazing increases of production or productive capacity in both manufacturing and agriculture caused Robert A. Millikan to say in a recent issue of *Science:* "Through the application of science mankind in the United States can produce more food than it can eat, more clothes than it can wear, and more buildings than it can occupy." A headline in one of the great newspapers illustrated this statement in graphic fashion. "Too much wheat, a great world dilemma, a vast increase in output of four countries, Canada, United States, Argentina, Australia, has caused amazing overproduction; 32 per cent more of wheat against 10 per cent more of population." This headline writer has expressed the situation clearly.

But why, one would ask, should an increase of a commodity as valuable as wheat be so upsetting to the world's economic life? There are undoubtedly millions of people who could well use much of this increased production. The difficulty comes from an unbalanced production. There may not be too much wheat in absolute terms; but when there is too much wheat in relation to other commodities, the exchange price of wheat gets out of line and causes a great deal of hardship to those producing wheat. In this way the economic order is pointing out in its very blind fashion that the wheat producers would contribute more to economic welfare by producing something else.

We have no economic machinery for assisting in the straightening out of these maladjustments other than the slow and blind process of price changes, accompanied in many cases by unemployment with all its attendant ills and sufferings.

We find the same story in almost every field of agriculture and industry. Too much coffee, too much cotton, too much copper, too much tin, too much lead, too much rubber, too much tea, too much sugar, too many shoes, too many automobiles, or too much cotton cloth are being produced. One not personally interested in the production of any of these commodities might well ask: "Too much for whom?" Obviously, too much for the person who is doing the producing. Certainly not too much for the people in other trades and industries who get the result of cheaper prices. In every one of these cases are there not many people in the world who could readily use more of the commodity concerned? The excessive output is in terms of the price received by the producer. In other words, it is in terms of its exchange value with other commodities. If all other commodities increased in like fashion, one would have no quarrel, because under such conditions one's product's exchange value would keep up. Again we state that there is no economic machinery other than this slow and cumbersome price process to plan our production for us. Perhaps here we have already found the crucial defect of our régime of private capitalism. Unless some drastic improvements can be made in our scheme of planning and co-ordinating production, we shall be forced to admit a most serious defect of our economic order.

Results for the People. Perhaps no more freakish or stranger economic phenomenon has developed in all eco-

nomic history than the sight of a world producing "too much" at a time when millions of people are unemployed and doubtless many millions going without enough of the bare necessities of life.

One authority recently said: "We are told the world is suffering from superproduction. Simultaneously we are informed that unemployment in every civilized country tends to increase, and although the factor of unemployment is concrete and readily reducible to exact figures in almost every country in the world, the same cannot be said of the allegation that for a variety of reasons the civilized world is now producing more goods than it actually needs.[1]"

Distinguished economists have pointed to overproduction in many fields. Wheat and cotton are conspicuous examples among agricultural production. The productive capacity of many manufacturing plants exceeds by far our capacity to consume. Certain economists point out that *balanced* production is needed. The problem of balanced production is one of the problems of this book.

Many of our business leaders would correct the situation by lowering wages and prices so that we could sell the surplus abroad in the foreign market and thereby solve the problem for the United States. Even assuming that one country could get a monopoly of this solution, is it sensible to work underpaid labor for the sake of producing things to give away to other countries?

Another World? Is not ours a strange country? With us five cows are worth more than ten cows; five bales of cotton are worth more than ten bales of cotton; five good ships are worth more than ten good ships to sail the sea.

[1] Courtesy of the *International Digest.*

In our country things have been destroyed to make what was left more valuable than the total had been before. Cotton was left in the fields so that what was picked would be more valuable. Even food was destroyed in order that the food that was left would be more valuable.

Will it be strange if a century or so from now people doubt whether such a country ever existed, especially if records show that there was a great deal of poverty in this country, that many people were hungry, that bread lines formed in the cities, that even in the rural districts in certain places during the especially bad years many people lacked necessary food and clothing?

Many say that this condition is the result of natural laws and cannot be helped. More curious critics have found that this condition exists because the people of this country have a very peculiar conception of the nature of value in the economic world. This peculiar conception of value has much to do with the conditions mentioned above. It is the story of value that we want to tell you. It is one of the most interesting and at the same time one of the oddest stories in human development.

To the economist *value* means simply the ability to command something in exchange. A thing is valuable if you can get much in exchange for it. It is not very valuable if you can get but little in exchange for it. This is the substance of value as far as the classical economist is concerned.

Why Goods Have Been Destroyed. If people have much of something they will not give anything of great value for more of this first item. For instance, if everyone has all the wheat he wants, no one will give anything of value for

additional wheat. Wheat will have a very low value in exchange. If by destroying some of the wheat it is possible to create a situation where many people do not have enough, the people who do not have enough will be willing to exchange something of value for wheat. This will raise the price of all wheat, and it may easily follow that the wheat which is left after some has been destroyed is of greater value than the total amount of wheat had been before any of it was destroyed. Thus we see why it is that even in a country where many people do not have enough, things that would be very useful are sometimes destroyed. It is because those who have the superabundance can thereby force others who do not have enough to give them more in exchange for what they need.

The amount of material actually destroyed is probably very small. The amount that is not produced which could easily be produced and which many people need is almost incredibly large. In many fields of industrial activity far more could be produced than is produced. In many cases, two or even three times as much could be produced either with present plant equipment or with easily constructed plant equipment. Something in the process and scheme of value as developed is a major factor in preventing this from being done. Whole industries exist under the constant fear that so much will be produced that the exchange value of the product of that industry will be lowered. The conservative argues that value is dependent upon utility and scarcity. He contends that both of these things must be present. It is argued quite logically that many things of very great utility have no value; for instance, air and daylight and water. These three things have perhaps the greatest utility

of any three things, and yet, because they are not scarce, they have no value in exchange.

Produce More and Get Less. If someone had said, without giving evidence, that the more potatoes you grew the less they would be worth, most of us would not have believed it. Table VI, however, lists facts that prove that this anomalous situation really does exist. In 1925, 321 mil-

TABLE VI—PRODUCTION AND PRICE OF POTATOES [1]

Year	Production (millions of bushels)	Rank	Average Farm Price (dollars per bushel)	Farm Value (millions of dollars)	Rank
1928	463	1	.64	281	6
1924	420	2	.76	312	5
1927	403	3	1.11	448	4
1929	359	4	1.31	470	3
1926	354	5	1.40	496	2
1925	321	6	1.66	532	1

lion bushels of potatoes were produced; they were worth 532 million dollars. In 1928, 463 million bushels were produced; they were worth 281 million dollars. Increase what you produce by a third, and you get about half as much for it. That seems impossible, yet it actually happened. In this table the production of potatoes for the years 1924 through 1929 is given. The figures are arranged so that the year of largest production is put first. The other years are arranged in order of decreasing production. The other side of the table gives total value received for the crop each year. It is almost unbelievable, but the fact is that the larger the production is in any year, the smaller is the total value of the crop. The larger the value, the smaller the production.

[1] *Federal Farm Board Release*, April 13, 1931.

It is easy to see the conflict between amount and value. Society needs abundance. Individuals producing a particular commodity desire to have a small amount produced in order to get a large value. Until this conflict between amount and value is solved, it will be impossible to carry production as high as it should be carried.

TABLE VII—PRODUCTION AND PRICE OF COTTON[1]

Year	Millions of Bales[2]	Cents per Pound[3]
1925	16.1	18.2
1926	17.7	10.9
1927	12.7	19.6
1928	14.2	18.4
1929	14.5	16.4

Table VII gives the amount of cotton produced and the price per pound received for the cotton. The years 1926 and 1927 should be noted particularly. The enormous crop of 1926, the largest ever grown, brought an average price of a little over 10 cents a pound. The very small crop of 1927 brought over 19 cents a pound. We have the anomalous situation of 12 million bales of cotton bringing 200 million dollars more than 17 million bales. Production in 1928 and 1929 increased and the price dropped. In the years immediately following 1929 the prices dropped to far lower levels. This, however, was largely due to the depression and the great decrease in the price of all raw materials. In comparing production with the price received it is im-

[1] *Statistical Abstract of the United States*, 1931.
[2] Ibid. Millions of bales, see p. 689.
[3] Ibid. Cents per pound, p. 705.

portant to make sure that prices in general have remained about the same.

TABLE VIII—RELATION OF PRODUCTION TO PRICES[1]

Selected Products	Prices Compared with Normal (100) when:			
	Production Is 20 Per Cent below Normal	Production Is 10 Per Cent below Normal	Production Is 10 Per Cent above Normal	Production Is 20 Per Cent above Normal
Apples—United States production related to New York City wholesale price of 16 varieties, 1894–1915	117	108	94	88
Corn—United States production related to United States farm price, 1875–1913	128	113	90	82
Oats—World production, 1899–1914, related to United States farm price, 1899–1914	148	120	85	73
Rice—World production, 1905–1915, related to New Orleans wholesale price of rough rice, 1905–1916	133	114	89	79
Wheat—World production, 1899–1914, related to Liverpool spot price of red wheat, 1899–1914	125	111	91	83
Wheat—Total United States production, 1899–1913, related to Kansas farm price, 1899–1913	134	115	88	79
Cotton—United States production related to United States farm price, 1882–1913	112	105	95	91
Cattle—receipts at Chicago, 1890–1912, related to United States farm price, 1891–1913	136	116	88	78

Table VIII shows even more clearly and conclusively the relation between price and the amounts of different commodities produced. We see that when the production of apples is 20 per cent below normal, the price is about 17 per cent above normal. When production is about 10 per cent

[1] Warren, G. F., and Pearson, F. A., *Interrelationships of Supply and Price.*

below normal, the price is about 8 per cent above normal. The same tendency is noted in the prices of the other commodities listed in the table; when the production is low the price is high; when the production is high the price is low.

This peculiar relation between amount and value holds in all parts of the economic order. We can see it very clearly in the price of certain agricultural commodities. Even the headlines of the newspapers show this. Such a statement as the following is not unusual: "1928 crops larger but value smaller." The next year the headlines in a New York paper quoting the Department of Agriculture said: "Crop value gains $85,000,000 in year. Government estimate shows money increase in spite of 5 per cent drop in output."

The Department of Agriculture has issued many figures along the same line.[1] One of the charts prepared by this department gives the production of peaches in the United States and compares this with the price received per bushel. This chart shows that if production falls about 10 per cent below normal the price per bushel rises almost 10 per cent above normal. If production declines 20 per cent, the price per bushel rises almost 20 per cent. If production increases 10 per cent above normal, the price per bushel falls about 10 per cent. If production rises about 20 per cent above normal the price declines about 20 per cent below normal.

Much the same relation holds between the amount and the price of hogs. When the supply of hogs drops 10 per cent, the price per pound increases about 10 per cent. When the supply decreases about 20 per cent, the price per pound increases almost 20 per cent. When the supply is about

[1] *Yearbook of Agriculture*, 1926, pp. 321, 566, 758.

10 per cent above normal, the price drops almost 10 per cent. When the supply is 20 per cent above normal, the prices are about 20 per cent below the average.

The relation between supply and price in farm labor is much the same as it is for peaches and hogs. The Department of Agriculture has studied the supply of farm labor and the price paid for it. The results indicate that a 10 per cent decrease in the supply will raise wages almost 10 per cent. An increase of 10 per cent in the supply will lower prices almost 10 per cent. This Department of Agriculture study covered only a few years. Further study would be necessary to see if similar results would be found at other times under different conditions. The study already made does, however, raise a question regarding the very great importance of the number of people that should be available in any occupation. It clearly shows the necessity of more adequate planning in this field.

Value Determined by Scarcity. In theory, at least, if an excess amount of any material were produced, exactly the same thing would happen to it. It is what many economists call the marginal utility that determines the value of either materials or services. If there are only a few people who can provide a certain kind of service and many people who want it, that kind of service will be expensive. If, on the other hand, many people can supply a certain service and the demand for such service is small, the service will have little value.

Monopoly and Value. Value is intimately connected with scarcity. For this reason in the past it has been connected with monopoly and special privilege. There has been much talk of freedom and equality of opportunity in

the world since the French Revolution. As a matter of fact, that freedom has been in a large part confined to the political sphere. Perhaps in the pioneer days it had some factual basis in the economic field in this country. But it is quite unjustifiable to assert that all occupations and all professions and businesses are equally open to all people.

There are many industries the control and development of which necessitate very large capital. If one does not have the means of getting capital, one does not have the freedom to enter these fields. The tenacity with which special privilege has been held and the reluctance of the public to take steps to eliminate it have been due in large part to the subtle nature of the special privilege. Much of this special privilege has been related to the control of value of a given service or as raw material.

Will the Difficulties Cure Themselves? In the past we have been told that nothing could be done about the difficulties and conflicts that resulted; that they would adjust themselves by the blind law of supply and demand. We have been told that if too many people become doctors, the price of medical service will fall until the low fees keep more people from entering that field. We are told that the same would be true for engineers, wheat farmers, coal miners, or any other group. Bitter experience over generations has taught the inadequacy of this assumption. It is quite true that these results will follow within certain limits if everyone has full information regarding all opportunities and perfect freedom to go into whatever occupation he desired.

These two assumptions of full information and freedom to seize the opportunity are implied in the argument that

things will adjust themselves. We know, as a matter of fact, that people do not have full information or equal freedom to grasp opportunities. Until quite definite steps are taken to bring about these conditions, we have no right to assume that correct occupational adjustments will follow.

One step in the solution of our difficulties would thus seem to be the provision of full information and of equality of opportunity for all. An attempt in this direction would seem far from radical, since we in this country have always boasted of our equality of opportunity. A most important duty for the present generation is to see that full information is available regarding all occupations in all industries and that free opportunity to enter occupations be provided as equally as possible. If these two adjustments were made, we should have a world in which there would be much greater and better-balanced production and one for which a far greater claim of justice could be made.

Summary. Some knowledge of the nature of value in exchange is important for anyone who would understand the present economic order. We have not tried to give definitions of value that would satisfy the technical economist, but rather to offer a statement that would enable one to judge certain suggestions for improving the economic order. We have seen that the modern automatic machine makes possible an enormous increase in the output of many kinds of goods. We have seen that the capacity to produce has not been used to its full extent. In later chapters we shall ask many times why this is so. We shall point out many different factors that have some bearing on the problem. Among all the factors the peculiar nature of value is

one of the most important. Because of the fact that we can reduce the amount of wheat produced and make it worth more, an effort has been made to reduce the amount. Many industries are trying to reduce the amount produced in order to increase the value of the product. Efforts are being made to restore the economic balance by bringing about reductions in various fields. We might, however, have the balance on a higher level, rather than on a lower. Economic welfare consists in a balanced abundance. In our peculiar economic order value depends upon relative scarcity. How shall we solve this problem?

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CHAPTER V

PLANNING THE NEW WORLD

What Has Gone Before. In earlier chapters somewhat of the enormous productive capacity of American industry has been pointed out. Facts have been presented to indicate the vast output of physical commodities made possible by our new automatic machinery. It has also been clearly evident that our social machinery is not adequate to operate this physical plant at anything approaching its maximum capacity.

The fundamental nature of the difficulty is shown by the fact that productive capacity has increased greatly and that want and suffering have not declined in equal measure. We have seen that a large part of this difficulty grows out of the peculiar nature of value in a world where private profit is the motive for business activity. It is not necessary to destroy this profit motive, but it is necessary to get better control of it and to formulate better plans for production and distribution. Furthermore, there is as yet no conclusive evidence that there is a fundamental conflict between private ownership and a smoothly operating economic order.

However, the assumption of the eighteenth and nineteenth centuries that unrestricted or unregulated enterprise would operate successfully is unsound at the present time. When the great need for economic progress necessitated freeing the world from the mass of restrictions which had

grown up during the Middle Ages, there was some theoretical justification for insisting on noninterference in economic affairs. As long as it was very difficult to produce too much of any one thing, one might argue that a system of individual control of output was adequate. We cannot think that anyone, looking at the economic world today and seeing the ease with which economic balance can be upset by maladjustments of production and consumption, will still maintain that a system of unplanned production can possibly be justified. Unrestrained private development may be a perfect method for opening up a wilderness and conquering a new continent. It does not follow from this, however, that it is at all a satisfactory way of dealing with the highly interrelated economic structure of the present age. The production of too much or too little rubber in the East Indies may upset entire industries half way around the world. The breakdown of the coffee market in Brazil or of the cotton market in our own South may send into bankruptcy scores of concerns in many countries. If Detroit overexpands the automobile industry and later discharges tens of thousands of men, it is not only Detroit that suffers; it is the entire country. The closing of textile mills in New England or in South Carolina may mean the closing of schools or hospitals in Montana or in Texas.

Controlling Production by Price. We are told by some of the older economists that the amount of any given item produced is controlled automatically by price. If too little is being produced, the price goes up; if too much, the price goes down. In a world where wealth is very unequally distributed there is a certain objection to the justice of this procedure. Some of the things may be reduced in produc-

tion because people cannot buy them, even though they need them desperately.

Many people admit the defects of controlling production by our peculiar scheme of value and price, but maintain that any other method has more or greater defects. We maintain that there is another method of controlling production that is far superior. With this method definite planning is substituted for blind determination by price. Price would still be the key element in determining the quantity produced. But intelligent planning would cure price of its present serious affliction of blindness.

It may be argued that the change we are advocating is more extreme than merely making more intelligent the operation of our present system of control by price. Perhaps this is true, but we urge that the reader judge it on its merits rather than allow himself to be swayed by opponents to planning, who call it *socialism* or some other name which is abhorrent to the average American. The change is one of very profound importance for economic welfare and, we believe, for general human welfare.

We have seen that a major defect of the present system lies in its assumption that all people who work choose an occupation with complete information and equality of opportunity. In the actual world this full information and equality do not exist. This lack constitutes a fatal defect in the working of the system as it is. We would argue the necessity of providing these two conditions of complete information and a relatively real freedom of opportunity. These two things alone would go far toward removing some of the gravest objections to the present system of value. But to realize the greatest good that is indicated by the figures of

Chapter I, we must refine our present system by substituting an economic order definitely planned in many of its aspects for one controlled by a blind price system. Even under our planned order we should use relative prices as a major method of determining which industries should be expanded and which contracted. If industries were combined into large industrial groups and if output were definitely so planned as to make the product from each unit of industry equal, we should have the actual advantages as well as most of the theoretical advantages of the present system without the disadvantages.

Our planning would consist largely of an effort to make the "marginal returns" in each industry the same. That is, we should make sure that employing an additional man in a shoe factory would produce a larger return than employing an additional man in a sugar factory. We should arrange and plan production so that building a new automobile would bring a larger degree of welfare than building a new shoe factory. Under a planned system of economic development we should be able to operate our industries well toward their maximum capacity. We should have the correct number of people in each industry. This would permit each industry to operate at its real, that is, justified, maximum at all times.

Under a planned system we could not change the determinants of value. Utility plus relative scarcity would still be the determining factors. But we should control one of these factors, namely, the factor of scarcity. We should see to it that no group is allowed to control this factor in terms of its own interest. Once the meaning of value and the factors determining it are clearly understood, it is easy

to see that it is impossible to expect a full increase in the welfare of the whole population by leaving the task to necessarily self-interested individuals and groups. It is our contention that because of the peculiar nature of value in our economic order, it will be necessary to substitute a planned economic development for the unplanned and irresponsible system of the present time. We shall not have substituted a new theory of value, but we shall have definite control of one of the factors which determine value. We shall thereby be able to prevent many of those queer things that are happening in our country today.

Equal Returns from Equal Labor. Someone might well ask what we mean by making the products from industry equal. How many pounds of sugar does it take to equal a pair of shoes? How many hats does it take to equal a ton of steel? Obviously we do not mean equality in physical bulk or weight. If steel is worth twenty dollars a ton and hats worth five dollars apiece, we could say that four hats equal a ton of steel. But it does not immediately solve our difficulty to say we will take the dollar value of the commodities because, as we have shown, this dollar value is partly dependent upon scarcity. And if one group had sufficient control of all the sugar in the world, it might be able to make half as many pounds of sugar equal in value to a pair of shoes as was the case before. In our argument we say that if an industry produces goods of great value, it should be expanded. It will produce goods of great value because many people want what it produces. But if value depends upon quantity, how can we possibly use value to determine the quantity we should produce?

There are certain assumptions involved when we suggest

that value should be used as a method of determining when a given industry should be expanded. When we say this, we are referring to those industries that have social utility. Even though some members of society might be willing to pay a very high reward to one engaging in a given industry, it would not necessarily follow that such an industry should be carried on if society as a whole decided that the given industry was bad. This argument that industries with a high value should be expanded is confined entirely to those industries that are accepted within a given economic and cultural situation.

What, then, is the solution of this problem of using value in the determination of the amount to be produced? It is stated that an industry the product of which is large in value should increase its output. Difficulty and injustice arise when a monopoly or any artificial restriction limits the production and interferes with the determination of value. This gives a false measure of the value of the particular industry. To avoid this difficulty, then, there must be no interference or artificial control of the supply. From one angle, our argument simply reduces itself to the statement that, *except for social purposes*, there should be no interference with the conditions of supply in given fields. If there are no barriers, the proper amount of each material will be produced. This is very much like the classical doctrine of the eighteenth century, but there is this one enormous difference: We contend that it is impossible to bring about this condition of equality without planning and controlling the factors which determine scarcity. In a world where value is determined by scarcity and particular groups are powerful enough to affect that scarcity, the greatest in-

crease of welfare cannot be expected without positive control of the economic life by society as a whole.

It is in this phase of the argument that the business man in America has been largely right in his feeling, but entirely wrong in his result. He has assumed that if each person is left alone to engage in any activity which he thinks best, the greatest good for all will follow. He has neglected to consider the realities of the situation, which are that other business men who are able to do so are going to interfere in the supply of their product in order to increase its value. There will be all kinds of actual limitations in an attempt to maximize the value of the product of any one industry.

It is well within the bounds of possibility however that a highly socially conscious society could accept the criterion of the American business man, provided that control of this factor determining value is settled correctly.

How Much of Any Commodity to Produce. Any society however organized, whether capitalistic, socialistic, or communistic, or anything in between, must have some scheme of determining how much of each given commodity or service it will produce. There seem to be two major ways of doing this. One is to allow the consumer to determine by his purchases the amount to be produced. The alternative is to have the amount to be produced and to be available set by some group that makes the decision arbitrarily or in the light of the best information it can get. This problem seemingly will confront the world during any conceivable time in the future. Some means will have to be devised to determine how much of each particular commodity to produce.

We have suggested the criterion that the value of the

product of a given amount of energy and capital should be equal in all industries. We saw that this statement has little meaning at present because of the arbitrary nature of value. But the criterion would have great merit if this value were determined without restrictions of the supply. In other words, no group or combination of groups would be allowed to control the quantity produced in order artificially to raise the value of any product. If there were complete information about all occupations, about all work, and no barriers to movements, we might reasonably assume that the value of products would be a measure of what people wanted.

The Theory of Conscious Control. Our economic order has reached a stage of complexity where it is absolutely necessary for more nearly adequate, deliberate, conscious control to be exercised. No longer will the blind working of economic forces produce the maximum of welfare that is possible. It is readily admitted that from certain philosophical premises we may be in a predetermined world and that planning is utterly futile. We have no desire to enter the philosophical controversy as to whether or not free choice is a possibility for human beings. In the practical world of affairs mankind has assumed and, within at least reasonable limits, has decided that certain parts of our material environment can be ordered by us. We are not asking for a fundamental change in the philosophical position of a large group of people when in our argument we assume that it is possible for man to set up a practice of conscious control that will make some difference in the course of human events.

If the doctrine of predestination is ruled out, then, is there any valid reason which should prevent conscious human con-

trol from extending to man's economic affairs? Do we not now plan and direct certain aspects of our economic development? Whether a city is to be planned or to go unplanned has already been determined by human beings. The output of individual factories is now planned and carefully controlled. Whether entire industries are to be planned or left to accidental development is just as susceptible of human determination. We grant that the planning and control of an entire industry requires more mental ability and effort than the planning and control of a single factory. The difference is one of magnitude, not of kind. We stoutly insist that the mental ability of man is such that he is thoroughly capable of making the question of whether or not most of the economic order is to be co-ordinated into one efficient productive unit a matter of human choice. All the evidence that we are able to obtain points toward the conclusion that mankind would be much better off if the decision were made definitely to plan and direct and co-ordinate a major portion of economic activities.

Many people admit that it is all right to discuss the necessity of getting better control of our economic order, but they say that what we regard as a really effective control is totally contrary to everything in American tradition. To this we emphatically object. In the first place, we argue that American tradition is essentially a realistic facing of facts, and that once any given set of institutions breaks down, America is practical enough to consider the setting up of new institutions to take their place. A most important phase of American tradition is the practical, pragmatic attitude. If one thing does not work, we try something else. Evidence points to the conclusion that a completely individualistic

solution, although it may have worked at one time, no longer works. We have no doubt that American tradition will adjust itself to the changed conditions and develop new institutions.

City Planning. We are given added faith in the possibility of deliberate control of our environment from the development of city planning. A short generation ago practically anyone in America would have said: Plan cities? Utter nonsense! Cities grow! It is not necessary to plan them! Today that attitude would be expressed by scarcely one intelligent man in a hundred. Almost all cities in America have seen the necessity for some kind of orderly and systematic development. Our theory of city planning is inadequate and our practice is far from satisfactory, but few would argue that present practice does not represent an enormous improvement over the old attitude of doing nothing.

Practically every city of any size in America has set up some form of planning commissions. Several years ago there were over 700 definitely organized city-planning commissions. No one of these commissions is as yet dealing with all phases of the life of a city. However, brilliant beginnings have been made. In some cities the commissions are planning the streets and traffic, the major public buildings, the waterfronts. In others, they have started to regulate and control the general type of business and residential structures. In a few cities definite plans have been drawn to try to produce architectural unity throughout the city. Here and there the question is being raised as to whether it is possible to make even factories and foundries things of beauty. It will not be long until the aesthetic development of the entire city will play a major part in city planning. The

location of factories, the unification and co-ordination of terminal facilities, and other economic-architectural problems are beginning to receive attention.

Partly as an outgrowth of the general discussion of city planning and partly as the result of the traffic pressure created by the automobile, there has been a remarkable development of street, traffic, and highway planning. There is scarcely a state today without some form of highway department which gives more than nominal attention to the work of planning the development of highways. With the assistance of the Federal Government these plans are beginning to be co-ordinated.

The congestion of shipping in a harbor such as that of New York quickly leads to the necessity for some kind of systematic planning. The movement is almost world-wide in its scope, for whether one goes to London, Bremerhaven, or Marseille, one clearly sees signs of systematic planning.

However, there is a striking contrast when we compare the systematic planning of almost every important port in the world with the lack of planning for the people who do the work in that port. Governments plan for the physical development of many things, but they do not plan for the people. As Professor John D. Black states it, governments will count and plan the number of horses, cows, or fruit trees in the country, but will pay no attention to planning the work of its population.

An even more ironical situation develops in another field. Because of the efforts of a few very able and enterprising people, the school buildings and school grounds of some cities and even of rural-school districts are beginning to be planned remarkably well. The public builds a five-million-

dollar high school in Cleveland and a million-dollar high school in Dallas, and spends a correspondingly large sum on one in Los Angeles. These buildings are planned to utilize the last inch of space. The corridors are just wide enough to allow the maximum number of children to pass comfortably; the window area is carefully planned to provide the proper amount of light. But in no city is there a plan of what these schools should be doing in terms of the economic needs of that community. We plan the buildings but we do not plan on a broad basis what is to happen within them.

Partly as a result of city planning there has been a substantial development in planning not only schools but other public buildings as well, in regard to both the architectural aspect of the buildings themselves and the location and general arrangement of groups of public buildings. The improvement of the waterfront in Chicago, the civic center in Cleveland, the parkway in Philadelphia, and the projected civic center in New York are all indications of this movement. The concept of planning is beginning to move on down to the smaller places and to affect even ordinary public buildings. Admitting that the planning of the buildings is often highly artificial and without any organic relation to the economic or social functions which they should perform, and realizing that many times the buildings are copied from foreign environments and simply pasted upon the scene, the planning has undoubtedly been of tremendous value. The concept simply needs expansion, clarification, and refinement.

The present attempt to plan the parks, playgrounds, and open spaces of our cities is one of the most hopeful developments in the whole field of planning. About a generation ago the acquisition of parks by American cities was more or

less a matter of pure chance. Whether most of our citizens will have too much or too little time to enjoy these parks is still a matter of pure chance.

The Beginnings of Regional Planning. Following close upon the development of city planning came regional planning. No sooner did a commission attempt to plan for the development of a given city than it discovered that many of the problems of the city were problems of the surrounding region. This led inevitably to the concept of regional planning, which is beginning to develop on a very large scale. The work of the New York Regional Planning Commission is an illustration of what may be hoped for from this type of planning, once it is put upon a permanent and systematic basis. We are sure to see attempts made and doubtless brilliant successes gained in the field of regional planning.

Some forward-looking people had discovered even before the systematic development of regional planning that the problem of land planning was basic to much of our future progress. From the planning of cities and regions it is but a step to the concept of land planning on a national scale. The best answers cannot be given to many problems in city or regional planning unless something is known of the general policies of land utilization in the entire tributary territory. This quickly leads to the necessity of some consideration of the use of land on a national scale. The difficulties here seem almost insuperable, but the rewards are doubtless proportionately large. Within the past few years the Department of Agriculture has in a very emphatic manner called attention to this problem.

All of this provides a foundation for planning and control in terms of the larger social interest. We need to develop

techniques that will make the planning bodies directly responsible to all of the important groups in the country, and to make it impossible for any one group to profit at the expense of others through social control.

Industrial or Business Planning. Not only has planning invaded the field of our cities, but it has extended into our individual factories and industrial organizations. The scientific study of our industrial organizations began scarcely a generation ago. Time and motion studies in industrial plants were a definite attempt to substitute rational control for chance activity. This movement may appear ultimately as a most important step in the conscious control of our economic order. The logic of this study of individual workmen and of plant efficiency is irresistible. If it is necessary to plan the work of an individual workman, and if it is necessary to employ high-priced engineers to design plans to route material through the factory, it will sooner or later appear just as necessary to have high-priced engineers study the co-ordination of different industries and of various units of the entire economic system.

In the handicraft shoe shop or furniture establishment of a century ago each man could wander off and find his own material stacked up wherever it might be in the shop. Today the efficiency of a great industrial plant so run would rapidly approach zero. Just so does the efficiency of the economic unit known as the United States rapidly approach zero when breakdowns in the soft coal industry, or in the textile industry, or in agriculture, or in banking upset the entire economic order. Planning has been necessary within the individual industrial establishment. Planning is desperately needed within entire industries today. Tomorrow planning

and co-ordination of one industry with another will be a paramount problem. Upon the solution to this problem of co-ordination in large part hinges the continued economic growth of the United States. With this problem solved there seems to be almost no limit to our productive capacity and to the level of economic welfare to which the country might be raised.

Co-ordinated Economic Planning. The pressing need of America today is for some genius to appear or some series of geniuses (or plodders!) who will provide the necessary first steps for this co-ordinated economic planning. City planning at first was understood by few. Industrial or business planning within a single factory aroused opposition and antagonism. The attempt to co-ordinate the economic system will likewise arouse the bitterest antagonism from those who do not understand its purpose. Perhaps even more will it arouse those who think that their vested interests will be disturbed. Alert groups, also, will try to turn the new technique to their own ends. The schools and all those charged with the general welfare of the people must see to it that the instruments of planning are so designed and controlled that they will operate in the interest of the public at large.

Cultural and Social Planning. When this economic or industrial planning gets well started it will have to be co-ordinated with, and made a part of, a larger scheme of cultural and social planning. If American industries are co-ordinated and raised to a relatively high level of efficiency in terms of their possibilities, millions of people now at work in agriculture and industry will be transferred to other fields. A theory of the relative value of different types of activity

and services will have to be evolved. A so-called automatic pricing system has largely made these decisions in the past. Back of this system there was a theoretical assumption that the most desirable thing would be produced because people would be willing to pay for it if they wanted it, and that this would consequently make the demand for the item. In a simple world of equal purchasing power much could be said for this theory. In a world where people have been adequately educated regarding relative values even more could be said for it. And within certain limits it could be used indefinitely in the future.

But along with the planning of the economic life will doubtless have to go far more serious consideration of the cultural and social ends that are regarded as desirable. This means the direct opposite of having any one existing group determine these ends and values. The proper amount of discussion and intelligence of all people should be applied to this determination. It is simply substituting a deliberately thought-out policy of relative values for accident or unreasoned chance. There may be no one commission to crystallize all of these decisions, but much better agencies and avenues will have to be worked out by which more and more enlightened decisions can be made and carried through.

With the increasing amount of leisure which the world would face in a planned economic order, some intelligent action would have to be taken regarding additional human activity. As we have shown elsewhere, there is no lack of things that need to be done in the world. The only problem is an organization that will make it possible for people to do these things.

Planning Commissions. The truth that conscious control does make a difference and that planning is possible has led to the setting up of a long series of planning commissions. In the United States we have set up commissions enough to show clearly that there is no theoretical objection to the attempt to plan and co-ordinate our economic life. A study of the powers and duties of these commissions, I think, would convince anyone that it would take no great extension of theory to justify the setting up of more inclusive commissions to co-ordinate and plan our economic order. A hasty glance at a few of the commissions will illustrate the range of their activity.

We have already seen something of the development and practice of city planning. Practically everyone would accept the theory of city planning and admit that it is possible within limits to control and plan the development of our cities.

A half a century ago a large proportion of the American public assumed that planning, guidance, and control of railroads was unnecessary. The story of the development of the Interstate Commerce Commission is a story of a continuous struggle against the railroads. The railroads opposed the appointment of the Interstate Commerce Commission; they have consistently opposed practically every extension of its power. Although for twenty years the opposition of the railroads to the very existence of the Commission was bitter and insistent, there are probably very few responsible railroad officials today who would advocate its complete abolition. In some respects, undoubtedly, the Commission has been a failure, but few would say that the situation has not been better than if there had been no commission.

It is quite true that many railroads have been in a desperate condition in recent years. Some people would like to hold the Commission partly responsible. It is well to remember, however, that America had a plentiful supply of bankrupt railroads and receiverships before the Commission was established. We have no desire to enter a plea for the Interstate Commerce Commission. We simply cite it as an illustration that when an emergency arises the American people have been willing to set up certain types of control and planning bodies.

Much the same position might be taken in regard to the Federal Reserve Board that has been taken in regard to the Interstate Commerce Commission. There may not be a single individual who is pleased with everything that the Federal Reserve Board has done. Many people are quite convinced that some expensive mistakes have been made—some that have been very bad for the country. Even if this position is justified, it does not prove that creating the Board was a step in the wrong direction. Although the banks fought the establishment of the Federal Reserve Board almost as consistently as the railroads fought the establishment of the Interstate Commerce Commission, there were probably few responsible bankers during the financial crisis of 1933 who would have desired the complete abolition of the Federal Reserve System; if anything, an extension of the powers of the Board would have been advocated.

Probably a large proportion of our population is convinced of the necessity of a better control of our monetary system. It is improbable that anyone knows the best solution of the problem. The answer may lie in the field of far more planning in regard to our monetary unit and the larger social

use of our whole financial system. There seems to be no reason to think that there is not intelligence enough in the financial and economic community and in the public at large in America to plan adequately the use of our financial resources.

One of the outstanding causes of the difficulty of our financial system is the erratic action of the industrial and agricultural systems. If these were planned and co-ordinated, the control of finance would be far simpler. As Professor J. M. Keynes has shown, the financial factors in turn can have a profound effect in planning and stabilizing all the rest of our economic order. This is simply another link in the chain showing that we must begin to plan systematically all phases of our economic order, financial as well as industrial and agricultural.

Emergency Governmental Planning. In the minds of many people the National Recovery Act of 1933 was the first step in beginning to plan the economic development of our country. Many things were attempted under this Act and the allied laws. The most important, perhaps, were to allow industry to organize, in many cases to set hours of work and minimal prices, and in some cases to establish control of the amount produced. In occasional industries, such as lumber, the Act with the related codes went so far as to provide an actual quota to each of the major units of the industry. An effort was made to determine the minimal wages that would be paid and the maximal hours of labor. Child labor was nominally abolished and certain other advances were made.

Although all this bears a certain resemblance to economic planning, it would be unfortunate to confuse it with a care-

fully worked out planning policy. The National Recovery Act was hurriedly devised to meet an emergency situation. It was forced from the authorities in Washington upon the country at large. There was relatively little understanding of its need and purposes on the part of the mass of the people, whether employers or workers. The legislation was conceived with the best of intentions and was doubtless very advantageous for the short time it was in effect. Perhaps the main lesson to be learned from the effort was a confirmation of what we already knew—that you cannot do an adequate job of economic planning from a central source at the top. Planning, at least on any democratic basis, involves a widespread and long continued discussion of the aims and purposes of planning. It necessitates a slow building up of the mechanism for that planning, and the elaboration of machinery to carry out the plans. From the very nature of the case, this cannot be done on a democratic basis in a short period of time. It is more than doubtful whether it can be done hurriedly even under autocratic auspices, except in very limited fields.

Agricultural Adjustment Act. The Agricultural Adjustment Act of 1933 is another type of effort that made a first beginning toward agricultural planning. Essentially it involved the control of acreage or production in certain fields of agriculture. In some cases actual quotas were established and the farmers were paid to reduce their production below these quotas. The money was obtained from a processing tax upon the sale of all the product. The same difficulty was met here as under the National Recovery Act. It was the effort to force upon people something for which they were not prepared. It is true that the administration had

a mandate from the people to do something, and that under the circumstances this was a reasonable thing to do. But from the nature of the case it could not work in an adequate manner. It is safe to say that it is impossible to plan agricultural production in a satisfactory manner on a democratic basis without building agricultural "co-operatives" that are powerful enough to control production. Education in the rural districts might play a real part in building such co-operatives.

Needed Supplement to Political Government. It is all very well to discuss the necessity of planning American economic life, but sooner or later the very practical question must arise as to whether we have any social machinery by which this can be done. Many people will immediately say that it is more government in business, and that we have too much of that already. Many things lead one to agree with the criticism. Many persons think that popular or parliamentary government in Western Europe and America has not been particularly successful when applied to business. Certainly it has not been so successful that one would unhesitatingly advocate the taking over of large additional sections of our economic life by our political institutions.

Although one's emotion and sympathy might be otherwise, one would be forced to admit that there is much to the contention of the business man that parliamentary government has not distinguished itself by its excursions into economic matters. In fact the more or less instinctive dread of the business man that more government in business might interfere with his profits has perhaps led to a result that has been sounder socially than he has known. The argument of the socialists of the late nineteenth and early twentieth

centuries in regard to government ownership and operation of even public utilities doubtless has a large element of danger in it. The business man was probably objecting to an extension of governmental control on the assumption that it would interfere with his private profit. If this were all of the objection, we might not be greatly impressed. However, a fair study of the picture forces us to admit that there are other objections to having political government take over any large number of economic functions. It does not follow that other instruments of social control cannot be developed that will operate efficiently.

Modern Government Political and Not Economic. The reason that present-day parliamentary government is not adequate to deal with economic problems can be easily discovered. Government was evolved in this country as a means of bringing about political liberty. By and large that is true in most of the advanced countries of the world. It would be little short of miraculous that an institution developed for the purpose of bringing political liberty should prove to be an efficient instrument for the purpose of bringing economic liberty and all the evidence shows that thus far it has not brought economic liberty. The development of institutions to bring political liberty is one of the great achievements of the human race. But to assume that an instrument evolved for one purpose will be the best for another purpose is to make a totally unwarranted assumption.

Why Political Government Is Inadequate. Two further points will make clear the reason for this. The basic assumption of political democracy and of the democratic political method of solving questions is that one person is as competent as any other person to decide on political issues. On

questions of your political freedom you are as competent as any man alive. On the basic questions that constitute the general outline of all political and legal liberty, one man's opinion is as good as that of any other. There is no man who can tell you when you are free. But it was an unwarranted extension of this belief that led American democracy in the early nineteenth century to make the great mistake of assuming that each man was competent to hold any public office even if the public office dealt with technical matters.

Because centuries had demonstrated that no group of men could be trusted with the political liberty of any other group, the assumption was made that all men were equal for all purposes. For questions involving liberty each man is a sovereign and must decide and only can decide for himself. And the judgment of no other man can be trusted on this point. Because this is true, however, it does not follow that on technical questions of originating and carrying out policies one man's opinion is as good as another's. No one would maintain that the opinion of the layman is equal to the opinion of the public-health authority on methods of combating disease or of stopping an epidemic. No one would maintain that the ordinary citizen is as competent as the skilled engineer to build a bridge over the Hudson River or to bore a tunnel under it. The ordinary citizen cannot be trusted to draw the plans for a skyscraper or of a great airship. These are technical problems and demand expert opinion.

It is quite true that questions of political liberty ultimately involve highly technical problems, but the technical experts should be there to provide the information and allow the citizen to make the decision. From the time of Jacksonian

democracy on, America has paid an exorbitant price for the popular assumption that any man is competent to fill almost any post of public responsibility. The theory clearly becomes absurd when we reach the twentieth century and expect the ordinary Congressman to deal with highly technical questions of international trade, tariffs, banking, railroad transportation, etc. The utter inadequacy with which these issues are handled by political bodies sufficiently invalidates the theory. The absurdity is added to a hundred times when we attempt to use the frail framework of political institutions to carry the enormous weight of an interdependent economic world.

The Way to Lose Our Political Liberty. Our forefathers who designed our system of government designed a marvelous instrument to bring political freedom. It never entered their heads that their descendants would expect that instrument to be called upon to provide economic liberty.

In this country in the eighteenth century one could have made a valid plea that if men were left alone and if restrictions were removed, real and substantial economic freedom would result. As long as men could proceed to the West and take up new land, such a theory had substance to support it. Our fathers assumed that lack of restrictions would bring sufficient economic liberty. For that reason they made no provision about economic freedom in their framework of social control. We have diverted and degraded the great instrument designed for purposes of political liberty to the attempt to bring economic liberty. To continue in this direction without doubt means the destruction of our political liberty as well as failure to obtain economic liberty. The instrument designed for one purpose cannot be made to

serve the other. For those people who are interested in preserving the substance of political liberty in America, there is probably no duty so important as to see to the immediate construction of new instruments of social control that will bring economic liberty.

Political Government and Technical Issues. We have only to look at the situation in other countries to learn what inevitably happens. Economic conditions become complicated. Elected by popular vote, a parliament, a chamber of deputies, a reichstag, or a congress attempts to deal with these issues. From the very nature of the case it is impossible. To expect a popularly elected representative to pass an intelligent opinion on technical issues which only trained men can pass intelligent opinions upon is to lead to quick destruction. Continued insistence that such be done must inevitably lead to the destruction of the very institution of political liberty.

Professor William B. Munro goes so far as to say: "To refer intricate problems of bank regulation, public finance, and international relations to the judgment of an unassorted populace is merely to set up a supreme court of ignorance before which all varieties of self-interest, sectionalism, and prejudice can plead their cause in the name of party principles." This states very clearly the inability of the particular institutions we have developed for political liberty to deal with these economic questions.

Many men in Italy and Germany have come to fear that parliamentary democracy is not a competent instrument with which to deal with the complicated questions of the present day. There was never a more justified fear haunting the mind of any man, but in these countries the attempts to

solve the problem have led to practically complete loss of political freedom.

The Nature of the New Planning. If parliamentary government is inadequate to this task of planning, what can we do? Does this mean that it is impossible to control and plan our economic development? Most emphatically it does not. It will be necessary, however, to do the planning by means of functional groups. It will be necessary to plan occupations by those competent in the occupations and interested in occupational planning. It will be necessary to plan for the production of any commodity or service in exactly the same way. What we are looking for, however, is some means of planning in terms of the broader social interest that will use expert knowledge and still will be democratically controlled.

Perhaps we can illustrate what this means by suggesting a way to plan the number of people who are to engage in a given occupation. There might be an occupational planning body elected from the different occupations in each community. This occupational planning body would attempt to decide how many people there should be in each occupation and how best to use all of the people who want to do work. There would be an advisory technical committee composed of the best technical ability in the community. In addition, there would be a state-wide occupational planning body elected by the occupational bodies of the local communities. Again, there would be a broad representative body to register general decisions and an expert technical committee to advise on specialized matters. Over these state organizations there would be similar national occupational planning bodies.

The aim would be to build an organization that had competent people to decide issues which they were competent to decide. In this case you ask the plumbers or the doctors of the community to elect representatives who can look out for their occupational interests. You do not ask them to elect a representative on a hundred and twenty different issues about which they cannot be informed. You ask the legislative body to decide on policies in the field in which it is competent with the assistance of its technical committee. You set up an organization that can act in the light of the general principles laid down by the legislative body.

Many will say that it is impossible to construct such organizations for the hundreds of different occupational fields. It may be a very long and difficult process; in any case it is primarily an educative process. But unless we are willing to take the trouble to construct some such machinery that is competent to deal with these issues, there is no reason to think that we will indefinitely continue to have democratic control of the ends that we want and an expert operation to secure those ends.

Summary. This chapter has pointed out that planning is not foreign to many sections of American enterprise. The American people have been willing to plan certain phases of their economic and social life. This is shown clearly by the rapid extension of city planning. The planning of individual industrial plants has also spread with great rapidity. It has been pointed out that the existing political state was not designed for the purpose of broad-scale economic planning, and there is no reason to think that it could be made an effective instrument for this task. We need new functional groups organized on a democratic basis

guided by expert advice. To show how such groups can be built will be one of the main duties of education in the coming years.

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CHAPTER VI

AGRICULTURE AND LAND PLANNING

The condition of agriculture is an illustration of the fact that automatic machinery and other laborsaving devices which should prove a great benefit to man can cause hardship and suffering. Let us examine again the cause for this and see in more detail what planning and control could do to help such an untoward situation.

The Present State of Agriculture. Agriculture in the United States is in a very unsatisfactory condition. As one economist points out, the difficulty is due to the fact that prices of farm products are low, while prices of what the farmer buys are high. This may be true, but it does not help us very much in understanding the present difficulty in agriculture.

We are interested in the answer to the question of why farm prices are low and what, if anything, can be done about it. The actual facts are almost unbelievable to one who is not familiar with them. It is estimated that in 1931 a large fraction of all crops grown was produced at a loss. According to the best figures available, many farmers sold wheat at 40 cents, 50 cents, and 60 cents a bushel when it cost them perhaps 70 cents or 80 cents to raise it. Someone will ask: In that case why did they not stop raising wheat? The answer is quite simple. Although in many cases the losses were heavy in raising wheat, they would have been even heavier if the farmer had stopped raising wheat.

If a farmer already has the machinery and farm equipment for growing wheat, not to use it for a year is a very expensive process. And although the losses may be heavy by continuing production, they would be even heavier by stopping it.

The same situation existed in regard to many other farm products. A large part of the corn, the cotton, and the livestock was produced at a cost greater than the selling price. What is the cause of this? And what, if anything, can be done about it? We now turn to the answer to these questions.

Farm Products Low, Industrial Products High. The reports of the United States Bureau of Labor Statistics show that farm prices declined far more than other prices during the period, 1929–33. Why did this happen? Many reasons can be given. One very important reason grows out of the conditions under which agriculture and industry are carried on. Many industries still find it possible to reduce operations when sales fall off. The automobile industry, for instance, adjusts its output very closely to sales. If sales begin to decline, men are discharged and output is reduced. In recent years much has been made of the fact that many overhead costs continue, even though a plant is closed down. This undoubtedly creates a situation in which some plants operate even though no profit is being made. There is still a large variable cost represented by wages. That it is still considered permissible for a manufacturing plant to dismiss workers and throw them back on the community for support means that many industries do close down when orders begin to fall off.

The farmer is in a different position as far as much of his activity is concerned. If he could discharge workers and thereby eliminate a large part of his total expense, he might

adjust his production more closely to the demand. On the ordinary farm there are relatively few expenses that can be eliminated even if production is reduced. Taxes, which in recent years in many places have been taking from 20 to 50 per cent of the cash income, go right on. The farmer and his family provide most of the labor. It would cost almost as much to remain in idleness on the farm as to produce. The result is that when prices fall, the farmer is likely to go on producing about the same amount. In many cases he reasons that he will work a little harder, produce a little more, and even if prices are not satisfactory, he will be all right.

Now, industry as a whole can reduce production more easily than can agriculture. This is one of the basic reasons why from 1929 through 1933 agricultural commodities tended to decline more than industrial commodities. Some method must be found to change these conditions if the price disparity between agricultural and industrial products is to be reduced. Either industry must be refused the right to discharge workers and must be compelled so to plan its operations that all workers will be employed, or else agriculture must be organized so that it can reduce production comparably with industry. Then the whole country can get poor together—fewer agricultural goods, fewer industrial goods. But the relative condition of the two groups will remain the same.

As stated before the basic cause of the agricultural depression is overproduction of agricultural commodities.[1] There are many causes contributing to this overproduction. Prob-

[1] This is not absolute overproduction, but overproduction relative to the production of other commodities. It might better be called maladjustment of production, or from the viewpoint of this book, unco-ordinated production.

ably the most important are the introduction of new machinery on the farms and the artificial stimulation of production.

Some of the factors contributing to this artificial stimulation were the World War and accompanying propaganda for food production. The War withdrew millions of people from agriculture in Europe. Production dropped drastically, and there was a great demand for American food products. This alone sharply stimulated production in the United States. When this country entered the War, a Food Administration was established which used tremendous pressure to increase the production of foodstuffs. The result of this campaign was to get the capacity-to-produce all out of line with normal consumption requirements.

When the War ended, European peasants slowly returned to the farms. In two or three years European production was well toward normal; the products of the artificial expansion in the United States had no market. The agricultural depression was one of those results of the War which are ordinarily not considered.

There is an additional complicating element in the fact that the United States set up these powerful propaganda organizations to increase production and create agricultural maladjustments. Shortly after the War ended, these organizations were abolished and no new organizations were formed to undo the damage already caused. It seems surprising that the American Government would exert all of the pressure of a war administration to overexpand agricultural production, and then leave the farmer alone and unaided to undo the damage. As later events have shown, the farmer has not been able to correct the maladjustment and

the recent agricultural depression was part of the price we paid for this carelessness.

New Machinery. The War further facilitated another development which was taking place in American agriculture; that is, the rapid introduction of improved machinery. There was a shortage of laborers in the United States after we entered the War. This was keenly felt on the farms and quickened the introduction of much new and improved agricultural machinery. This new machinery was able to do the work in far less time and so increased production. This extended to almost every phase of American agriculture. In particular, the introduction of hundreds of thousands of tractors displaced many horses and decreased the demand for feed.

Modern machinery has greatly increased the number of acres one man can tend. It is not uncommon now for one man to cultivate two or three hundred acres of wheat, whereas a generation ago he could cultivate only thirty to forty. We are told that a bushel of wheat can now be raised with ten minutes' work, as compared with the three hours that it took at the time of our grandfathers. Much the same decreases have occurred in the cultivation of corn and of many other farm products. The introduction of new and improved binders, more efficient tractors, the great increase in the use of trucks, and the hundred and one other improved farm machines have enormously increased agricultural production. At the same time the cost of production has dropped in many sections. The man who has the benefit of all of this new machinery plus low-priced land is perhaps able to produce wheat at a profit and sell it at 40 cents or 50 cents a bushel, while the farmer in the longer-established farming

regions without the benefit of the newer machinery may have a total production cost running up to a dollar a bushel.

There are many other factors that have added to the difficulties of the agricultural situation. The *per capita* consumption of many farm products has dropped during the past two decades. This is particularly true of many staple products, such as wheat and corn. Increased consumption has taken place in many specialty crops and products, such as spinach, lettuce, and cheese.

Bringing in More Land. Our Federal Government almost from the beginning has been engaged in the policy of rapid and forced expansion of agricultural land. At no time has the Federal Government had an adequate national land policy; that is, no effort has been made to keep the amount of land brought under cultivation in any relation to the need of increased output. This lack of comprehensive planning has been particularly unfortunate in the case of the Reclamation Service. Millions of acres of land are reclaimed from swamp or desert long before they are needed. Some of the most tragic stories of economic development are in connection with reclamation projects that were economically unsound from the first. A Federal land policy, supplemented by a sound land program in each state, is needed as part of a solution to the agricultural problem.

Can Anything Be Done? It seems difficult to believe that the increased efficiency of farm labor through modern machinery should be a major cause in producing an agricultural crisis. When invention comes along, it should increase human welfare. Instead of that, however, it has been upsetting the balance of economic life and in many cases it has left over a long period of years a tragic tale of suffering. Many people

have argued from this fact that the introduction of new machinery was necessarily a curse, particularly to the worker, and that it should not be permitted. We maintain flatly that this position is untenable, especially in view of our other possibility; namely, that production be planned and co-ordinated so that the increased efficiency will redound to the benefit of all and not lower the standards of living of the group involved.

We do not say that the price of commodities should not be reduced, but rather that the reduction in unit cost should be accompanied by increased output per person so that there will be no decrease in income. This, of course, may mean far larger production per person remaining in the industry, but rarely should the increased production per individual take place with the same number of people remaining in the occupation. Unless a decrease in price will stimulate greatly the quantity used, enough people should be moved so that the level of the income of people remaining will not be lower than the income of people in similar occupations. There is a way out of the agricultural depression. That way lies along the road of the planned development of agriculture. It is a part of the larger social and economic planning of the life of the country.

If, as a distinguished agricultural economist has stated, the basic cause of the agricultural depression is the low prices of farm products compared with the cost of other commodities, the only solution is to remedy this maladjustment. Farm prices can be brought in line with other prices only by control of farm production. This can be done by a planned development of agricultural output. Perhaps the most important thing to do is to develop agricultural co-operatives.

Agricultural Co-operatives. The agricultural co-operatives that are needed in America today include not only those dealing with production of agricultural commodities but with most other phases of agricultural life. The fact that a country as small as Denmark has literally hundreds of different agricultural co-operatives gives some indication of the number that would be required in this country. Even in Denmark the co-operatives are confined largely to the buying and selling of the things used and produced on the farm. It is necessary to have a very large number of co-operatives of this type, but that is only the first step in building a satisfactory rural America. After the economic co-operatives are built there must be a further movement dealing with the development of co-operatives in the cultural field. Perhaps the greatest drawback of agriculture in America has been the isolation of the individual farm house.

In most other countries of the world the agricultural population has lived in villages and gone out to the land. This at least has given the physical base for some kind of cultural group. In America we lack even this. The beginning step that has been made in Wisconsin toward land planning may well lead to the formation of real cultural groups in rural sections. A co-operative attempt to produce agricultural products and to supply the physical wants of life is important. The attempt to build co-operatives for cultural purposes is far more difficult, but at the same time at least equally important. Co-operatives must be developed to the point where they will be able to determine the amount of production of each member of the group. In no other way can an adequate return to the farmer be assured.

Farming As a Mode of Life. Many people interested in rural life at the present time insist that farming is not an occupation but a mode of life. Consequently they contend that financial return in it should not be compared with that in other fields. If such people would be consistent and admit that they are not interested in the financial return and have no quarrel with a low return, no difficulty would arise. But at the same time such people demand cultural facilities for rural sections equal to those for other areas. Many people particularly interested in rural life maintain that more people should return to the farms. If more people go back to the farms this will mean that more hogs, wheat, and cotton will be raised, thus lowering prices. Inevitably this means that the standard of living of the rural population would be lowered. Either these rural-life advocates will have to be content with fewer people on the farms and a high standard of living or with more people and a much lower standard of living. Either farming is one occupation along with the others and the number of people engaged in it should be determined on the economic grounds of "supply and demand," or it is an occupation of a different order removed from the economic sphere. Many people seemingly try to maintain both positions. It is perfectly logical to insist that there are superior moral values in farming, and consequently that people should be willing to farm even though they make little money. However, the people who take this position cannot logically complain of the low income of farmers.

How Many Farmers Do We Need? The great increase in machinery has enabled a constantly decreasing proportion of the population to produce sufficient agricultural commodities for the country's needs. In 1790 it took 90 per cent

of our population on the farms to provide the basic food, clothing, and shelter for the population. Ten per cent in the other occupations had to provide the cultural and intellectual services, the manufactured articles, and the financial and commercial services for the 90 per cent who were farmers. At the present time some 20 per cent of the population is producing more than enough food for the other 80 per cent. According to the best estimates that are available, if modern machinery were used adequately, 10 per cent of the population could supply food for the other 90 per cent. The other 90 per cent in turn could supply a vast range of cultural and intellectual services, of music and art, and of manufactured products, transportation, and other commodities.

In fact, the only way in which farmers can have a high standard of living is to have a small number of people in farming. If 90 per cent of all the population were on the farm it would be impossible for the few remaining people to provide any very large number of other commodities and services. Whether the people on the farms will get their part of the other commodities and services depends largely upon whether there are few enough people on the farm. If the number of people in agriculture is reduced to a point that will bring high prices for farm products, then the farming population will be able to command a high standard of living. The solution of the farm problem, then, is so to plan the number of people on the farm that people in this occupation will make the same income as people of equal ability in any other occupation. This, as we have seen, is the test for correct occupational distribution in all fields.

Can Agriculture Be Planned? It is all very well to talk of the necessity of planning the agricultural development of

America, but anyone who is acquainted with the individualistic tradition of the American farmer will immediately reply that it is practically impossible to get the farmer to cooperate on any program. It would be a most absurd thing to expect him to agree to a completely co-ordinated and controlled development of his entire economic life. As a matter of fact a typical American farmer would not consider such a suggestion at the present time.

This may seem to be equivalent to saying that there is no solution to the farm difficulty. That perhaps is too pessimistic. One hopeful note in the situation is that this individualistic attitude can be changed, though it may take generations. However, there are some immediate steps that can be taken. That the farmer is open-minded to new methods of agriculture is demonstrated by the fact that he has been snatching at straws to keep himself from drowning in the sea of farm difficulties. This fact has been illustrated for the past ten years by the way in which the farmer has tried all kinds of suggested expedients. At least this trial-and-error procedure shows that the desperate condition in which the farmer has found himself forces him to be somewhat open-minded, at least toward certain specific changes. Although it will take a long time to convince the American farmer of the necessity of making a fundamental change in his theory, we believe that real progress can be made and made quickly in regard to many specific things that need to be done.

The Rural Planning Act in Wisconsin is an illustration of one step that can be taken immediately in the right direction. Here we have a state deliberately embarking upon the policy of trying to plan the amount of land to be used in agriculture and in recreation. A definite attempt is to be made to close

up submarginal land and to see to it that all of the land which is farmed is capable of producing a fair living. This program, carried out logically and rationally, should greatly reduce the burden of keeping up roads in the rural districts of the state. Many one-teacher schools could be closed. Other important governmental savings could be made. In addition many of the most isolated farms would be abandoned.

Cultural Development of the Farm. Many people might object to a scheme to persuade farmers to abandon these isolated areas. The argument can be defended on cultural grounds even more strongly than on economic grounds. A frontier society may argue about the equality of every individual and equality of opportunity. As long as cultural opportunities were limited almost entirely to what each household provided for itself, then it was relatively unimportant whether a household was one mile or twenty miles away from the nearest cultural group. In a society such as ours where the larger cultural groups are able to provide so much more in the way of opportunity, and where people are dependent upon the group for a large proportion of their cultural development, it is humanly impossible to provide equality of opportunity without at the same time providing cultural group contacts.

The isolated farm house, miles from its nearest neighbor, cannot provide a rich cultural group life for all the people concerned. One of the causes of the intellectual barrenness of the pioneer society of America was that the farm houses were widely scattered. It does not necessarily follow that a high level of culture is always attained by having an adequate group life. It is practically impossible, however, to have a high degree of culture without closely organized

groups. It is not possible to provide cultural opportunity for the typical person of low income on the isolated farm equal to that which can be provided for the same person in a larger cultural group. Although we reach the necessity of land planning and systematic control of agricultural production on economic grounds, it can be defended perhaps more strongly and far more fundamentally on social and cultural grounds.

The Economics of the Isolated Farm. There is no society in the world, and there has never been, that is wealthy enough to provide really adequate educational and cultural opportunity for widely isolated households. One might even go further and say that it would be difficult if not impossible to provide even the physical basis for cultural development in a modern world for a population that is too widely scattered. The simple matter of the basic public utilities will show this very well. In the case of roads, it is obviously impossible to build hard-surface roads in a very sparsely settled community unless some larger community pays the bill. Where farm houses are a mile or two apart, it is simply not feasible to have adequate modern roads. The same thing applies to schools. With regard to libraries, music facilities, and other kinds of culture and recreation it is even clearer. More highly developed utilities such as telephones, electric lights, gas, and medical, dental, and hospital services are either prohibitive in expense or otherwise impossible to provide if a population becomes too scattered. There has been almost no attempt to determine what the minimum density of population should be in order to insure a decent standard of living. There is no doubt that large sections of rural America are far under the minimum necessary for any reasonable cultural life.

The Economics of Group Living. The economists who wrote the introduction to the General Survey of the New York Regional Plan raise a basic question regarding the distribution of the population. They point out that at one time practically all material moved from the isolated agricultural district to an urban center. As long as the bulk of income is spent upon food and clothing this probably remains true. But when you consider the highly fabricated results of modern industry, the value movement from the center to the scattered district becomes perhaps the chief movement. One might argue logically that the two movements must balance ultimately, but the important consideration is whether it is better to have population grouped so that the distribution of your highly fabricated material can be accomplished easily, or to have a widely scattered population and face the difficulty of returning all highly manufactured material to the isolated farm house.

These economists reach the conclusion that economic forces make inevitable a further concentration of population toward a reasonable density. This, of course, does not mean that the density may even approximate that of the typical existing urban district. It is quite possible that the urban district ought to be decentralized and that the various parts of the scattered rural district should be concentrated. In fact there is much to be said for both movements. The continued prosperity of American rural life may well depend upon a fundamental reorganization in terms of cultural units. A movement that starts out from economic grounds may become a force in the cultural regeneration of our rural districts.

Although looking at the movement as a whole one might

be inclined to be pessimistic, there seems to be no reason to think that there are not scores of places at which one could begin to plan the agricultural life of America. Every step that is taken toward this end will make the next step easier. If there is a solution to the problem of American agriculture it may well lie in the direction of an adequate scheme for planning agricultural development and land usage.

Summary. The solution of our agricultural problem, then, lies along this road: to have a national land policy such that no more land would be in cultivation than is necessary; this to be determined by the amount that will give the people working on this land a return equal to the return in other occupations; so to plan the number of people in agriculture that with everyone producing to full capacity the amount of return from the production will be equal to the amount of return in any other occupation. Through co-operatives, through land planning, through planning the number of people in agriculture—along this road lies the permanent solution of our agricultural problem.

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CHAPTER VII

WHAT IS THE SOCIAL FUNCTION OF MONOPOLIES?

Competition and Low Prices. There was once a community which believed that competition was the best way to obtain a fair price for any and all commodities and services. For this reason several telephone systems were established so that the competition among the different lines would bring about low prices. Five different water systems were established in the town. One water system had its pipes under ground; another on top of the ground; and another up in the air. Each one argued that its own method was the best for distributing water. One of the other companies had decided that a modern truck was far more convenient and it would not have pipes at all. There was furious and fierce competition to supply water for the people in this town.

A suggestion had been made many years before that perhaps a few milk companies could deliver milk more economically than a great many. This town decided otherwise, and by every means possible encouraged new milk companies to develop. The result was that one could have one's milk delivered at any ten-minute interval from 3 to 6 A. M. There were 36 different milk companies delivering milk in all parts of the town. No one company would charge a high price for milk, because if it did some other company would deliver it more cheaply.

This same town had four different electric-lighting companies. You could get your light from the company on the north side of the town, or on the south side, or on the east side, or on the west side. Each company had wires running by every house in town. The same was true regarding gas and many other services and commodities. This town was known as the example of competition in every field.

If you wanted to buy gasoline there were four gas stations on the four corners of a street. When you went down to the next street intersection, there were four other gas stations belonging to four other companies. A survey had shown that one grocery store to every three blocks would be adequate for this particular town. Since that would not provide enough competition, steps were taken to encourage more grocery stores until there were at least two in each block. There had been three rather successful department stores in this town. But competition was not sufficiently keen, so six more were established.

There had formerly been one cigar store at each downtown street intersection; but that did not provide sufficient competition, so two were established. In every field of economic activity competition was the order of the day.

In the professions competition was encouraged. A careful study had shown that for this particular community one doctor to each thousand people supplemented by the public-health department would provide an adequate health service. But competition would improve the situation, so ten doctors were encouraged for every thousand people. It had been determined some years before that one bricklayer for every 3000 people was an adequate number. But the fear that this might mean high prices led the town to train many

additional bricklayers in the attempt to reach the stage of one bricklayer for every hundred people. This town had definitely embarked upon the policy of training too many people for certain occupations so that these occupations would have severe competition among them.

No Competition and Low Prices. There was another community not so far from this first community which decided that five or six water systems were not necessary to provide adequate water at a fair price for the community. In fact, the community was slightly skeptical regarding the value of competition in lowering the price of water. The community even decided that one telephone system, one gas system, and one electric-light system would perhaps be adequate. This community even went so far as to attempt to determine the number of grocery stores, gasoline stations, and other services that would be needed, because they had found that in many of these fields competition instead of bringing about a fair price enormously increased the cost at which everyone had to sell his product.

A careful investigation had shown that an oil monopoly operating in a given district could sell gasoline at about half the price at which it could be sold where competition was indulged in. The second community decided that competition was an extravagance that it could not afford. Therefore, it proceeded to set up monopolies in many fields and to determine, more rationally than by competition, the quantity of a given service that should be provided.

There were dangers in this policy but the gains seemed to be so great that it was followed by the attempt to determine what fields should be allowed to indulge in unrestrained competition and in what fields some form of monopoly would be

more profitable to the corporation and to the consumers. The same technique was applied to the general field of retail trade and the so-called public utilities. Even in the field of occupational distribution it decided that some form of monopoly control adequately supervised would produce better occupational distribution than this so-called competition in which each person attempted to get into the occupation that would prove of the greatest benefit to himself.

This second community had also decided that the world had become so complicated that an individual unaided by some guidance and assistance was no longer able to judge his own best interest. It was no longer a safe assumption that if prices went too high in one field, someone else would enter that field and reduce prices. In fact, competition might be the great factor making the high prices necessary. This community was no longer willing to decide every issue on one general principle and say that competition in every field produced a fair price. They had no objection to competition as such, but in each industry and in each occupation they investigated the detailed facts to see whether competition or some monopoly properly controlled would produce a fair return to the producer and the lowest price to the consumer.

The Struggle of Two Ideas. Of course these two communities never existed in the actual world. They do exist in a world of ideas. Between the ideas of competition and monopoly there is a tremendous struggle taking place in the United States at the present time. We are trying to decide what shall be the place of monopolies in the new order of economic development. In the past, of course, it would have been held that competition was the way to determine a fair

price. Although we have been steadily drifting from that position in many fields, it is still the theoretical position held by most of our people.

Actually changes have been occurring with tremendous rapidity. A recent study has shown that practically half of the industrial wealth of America is owned by the great corporations. In fact, 200 of the largest corporations control almost half the total industrial wealth of the country. With the exception of land, farms, and publicly owned property, these 200 corporations own a large proportion of the total wealth of the country. In some fields competition is fierce among the different corporations. In a few the concentration has gone to such a point that competition has virtually disappeared. Some say that the only way to return to a satisfactory economic life would be to destroy these corporations and to restore the independent individual business man and the doctrine of competition.

This is probably an impossible position. The very nature of the modern industrial world demands and will long continue to demand more and more concentration. Full economy and efficiency of operation and production are obtained in many business fields only by large units. Corporations will doubtless become larger and larger during the course of the next generation. If the growth during the next thirty or forty years is as rapid as during the past generation, a very large proportion of the total wealth of the country will be in the hands of a few score of corporations. The time is probably gone forever when we could go back to a society in which competition in many fields will have any reality to the ordinary man. The practical question in the future is not whether we shall have great corporations and monopolies,

but whether the monopolies will be unregulated or socially controlled.

Traditional Ideas in This Country. How are prices held down to a fair level in the United States? Why does not someone buy all the wheat and then make everybody else pay a high price for it? Why does not someone buy up all of the steel mills or oil fields and charge a very high price for steel or oil? Many people in the United States have feared that this would happen. We have assumed that the way to get the best possible price for any commodity is to have a large number of people producing it; then the one who sold it most cheaply would ultimately get the business and the country would prosper. This is our famous doctrine of competition.

Our Extreme Individualism. It is quite true that we did not invent this theory or practice. Competition in one form or another had appeared in many societies through long centuries. As a whole the people who settled in the United States were a very self-reliant and individualistic group. The governments of the countries of Europe from which these settlers came had severely handicapped trade and commerce through a large part of the Middle Ages and well down to modern times by a great variety of restrictions such as tolls on trade passing from one city to another, restrictions on entering certain occupations, and the limiting of certain industries to certain locations. The old restrictions for limiting trade and commerce were undesirable in many ways. The result was to start a rebellion against restrictions and a movement against any outside interference in business. If each individual managed his own affairs to his own best interests, it was assumed that somehow the greatest good for

all would result. This was stated in explicit fashion by Adam Smith and by later economists.

This was about the time that our political institutions were being formed in the United States. Because of the fact that such thoughts were in the air and, further, that our economic life was such that unco-ordinated individual effort would operate in a highly successful fashion, we developed in colonial times an extreme form of the doctrine of competition. This reached the stage where the business man and the public leaders thought that unrestricted competition was an adequate theory for economic life. Competition was a quite defensible, satisfactory, and efficient way to settle the economic problems of the eighteenth century.

Conditions Change. With the industrial expansion of the nineteenth century conditions began to change. The pioneer's thinly settled society gave way to industrialized communities and modern cities. Some co-ordination and planning became necessary. We confined our planning at first to individual industrial plants and to a few aspects of our community life. Soon other things had to be included. It became evident that each individual could not efficiently build roads and provide his own transportation. Gradually, we developed a unified system of highways.

At first our railroads were tiny things of a few miles each, or at best of a few dozens or scores of miles. The systems grew larger and larger until by the close of the century most of the shorter lines had been absorbed into larger units. There is much talk at present of a consolidation of existing lines into a small number of planned and co-ordinating systems. For a long time it was thought that competition was the only possible method of getting the best railroad

rates. Two generations of experimenting with the Interstate Commerce Commission have perhaps convinced most informed people that unbridled and unrestrained competition is not the most satisfactory way to get even fair rates on railroads.

At the same time the American public developed a very great fear that when these industrial corporations became larger and larger, the increased power would be used to exploit the population rather than to bring about more efficient service and lower charges. The first experience with the gigantic industrial corporations of the late nineteenth and early twentieth century lent much color to this fear. The result was an era of opposition and violent antagonism to the so-called trusts and monopolies. They undoubtedly were being used as means of exploiting the public in favor of a relatively few privileged individuals. But the rage of the populace was no more in place than the unscrupulous activity of the trust. One was as short-sighted and stupid as the other. The public would have been far better off if it had spent its energy in trying to evolve adequate schemes of social control of the trusts and corporations, rather than to destroy them. We had almost a generation of the so-called "trust-busting" era, expressing itself in laws ranging all the way from the Sherman Antitrust Law to the Clayton Act in Restraint of Trade. Roughly, the period from 1890 to 1914 marks the height of this feeling.

By 1914 it was becoming evident to thinking people that in many fields a large corporation might be more efficient than a small one. The social problem was to see that this efficiency was passed on to the public and that size did not become a means simply of further exploitation. During the

emergency of the World War we no longer relied on competition to perform many functions it was supposed to perform. We suddenly decided that group control was possible and would be more effective and more efficient than the blind working of competition. By the end of the War many people were convinced that larger and more efficient units were needed provided that they could be controlled for the public interest.

TABLE IX—ESTIMATES OF CORPORATE WEALTH IN 1929 [1]

	Combined Assets (in billions of dollars)
200 largest corporations (excluding banking corporations)	81
Estimates of all corporations (excluding banking corporations)	165
Per cent largest 200 are of total	49.2

The Giants Grow. Table IX shows that the 200 largest corporations (excluding banking) had assets of approximately 81 billion dollars in 1929. The assets of all corporations (excluding banking) were approximately 165 billion. Thus almost exactly half of the corporate wealth of the country was in the hands of the 200 largest corporations. What is of far more importance, the rate of growth in the wealth of these corporations was far greater than that of the country as a whole. The authors of the book from which these figures are taken estimate that 2000 people control these corporations. Here we have a tremendous concentration of power. The control of half of the corporate wealth of the country is in the hands of 2000 people. That control is

[1] Berle and Means.—*The Modern Corporation and Private Property*, p. 28.

already divorced from ownership because the 2000 directors and officials who largely control these great corporations own only a very small fraction of the property they control. It is no longer a question of whether we shall have concentration of control. The question is: Will the control be used to operate industry to the maximum capacity for the good of all, or will the control be used for the private advantage of the few?

TABLE X—ASSETS OF 200 LARGEST NONBANKING CORPORATIONS [1]

Year	Assets (in billions of dollars)
1909	26
1919	43
1929	81

Table X shows the assets of the 200 largest nonbanking corporations. In 1909 the assets of these corporations amounted to approximately 26 billion dollars. In 1919 this had increased to 43 billion dollars. During the next 10 years there was a further increase to 81 billion dollars. As you know already, most of the increase from 1909 to 1919 was due to changes in the value of the dollar. The increase from 1919 to 1929 was much greater than the figures show, because prices were falling during this period.

Table XI shows the relation of the wealth controlled by the 200 largest corporations to the total wealth of the country. Approximately half of all the corporate wealth of the country is controlled by these 200 largest corporations. Far over a third of the total business wealth and almost a quarter of the total national wealth is controlled by them.

[1] Berle and Means.—*Op. cit.*

TABLE XI—RELATIVE IMPORTANCE OF LARGE CORPORATIONS [1]

(On or about January 1, 1930)

	Results Obtained by Actual Computation	Probable Limits
Proportion of corporate wealth (other than banking) controlled by the 200 largest corporations	49.2%	45–53%
Proportion of business wealth (other than banking) controlled by the 200 largest corporations	38.0%	35–45%
Proportion of national wealth controlled by the 200 largest corporations	22.0%	15–25%

How to Control. One of the major problems created by the growth of these great corporations arises from the fact that little or no effort was made to develop adequate instruments of social control that would permit them to take the place of wasteful and unbridled competition. The corporations themselves early sought that unified and co-ordinated control which was more economical than the old competition in many fields. It was so clear to many of our leaders that larger units would be more efficient in many industries that they did not understand the opposition of the public to them. They forgot the deep-seated objection of the American public to monopolies, to groups that had almost entire control in a given field. The industrial leaders were even more to blame for they made no effort to set up the planning and control bodies that would insure for the public reason-

[1] Berle and Means.—*Op. cit.*

able standards of price and quality. The public was and is quite justified in demanding some guarantee that a fair price and a fair quality will be maintained. Without any doubt the only way that this can be done over a long period of time is to develop some control body outside of the corporations themselves.

Briefly, then, the public has been, and wisely, very much afraid of monopolies. We have seen that an individualistic competitive system worked very satisfactorily in the early days. But conditions have changed now. As was shown in Chapter I, we have an almost incredible productive capacity which is not being used. There is every reason to think that a far-larger-scale industrial organization would be a great step forward in using this capacity to the limit. In many cases the consolidation would go as far as to amount to practical monopoly. In this case, obviously, something will have to be found to take the place of the former competition as a means of protecting the consumer. This will be a difficult but not an insuperable task. Upon the solution of this problem largely depends the answer to the question of whether America is entering a new economic era (a permanent age of plenty) or whether it will continue to vibrate up and down at a moderate pace in the old channels. Very large industrial units amounting to virtual monopolies in their fields could doubtless plan and adjust production so that all industries could be operated at a level that has never been approached before. Before the public would allow the formation of such monopolies adequate planning bodies would have to be set up in each industry for the protection of the public.

Perhaps such commissions should take a great variety of

forms, at least at first. In some industries they might closely approximate such established forms as the Interstate Commerce Commission or the state public utility commissions. Some of the codes under the National Recovery Act [1] might well prove suggestive. The kinds of organizations for control that are tried should range all the way from that of group organization and committees to commissions in full control of all types of powers. For some industries exceedingly powerful commissions should be constructed that would have power virtually to compel changes running through the entire industrial order. This might apply particularly to such depressed industrial groups as soft coal and textiles. On the other hand, these might be the very industries that would require a very loose organization. Some of the commissions doubtless should be very loosely organized and be little more than present trade agreements, legalized with representatives of the public as parties to the agreements.

The essential thing is that such planning bodies, if they were to operate under one general national planning body, could doubtless go far to keep our industrial life properly adjusted, stop our recurrent depressions, and enable all our industries to operate toward their maximum capacity. Perhaps the most important single function of this planning body of commissions would be to see that industries were kept within proper relation to each other in terms of expansion and that no industry would become unduly expanded in relation to others. This would mean, of course, far more adequate studies of rates of capital return and relative effi-

[1] The particular forms of control evolved under the N. R. A. in a short time to meet an emergency should not be expected to be the best forms that could be evolved.

ciency of labor in different industries than are available at the present time.

Relation of Monopoly, Value, and Productive Capacity. In Chapter IV we saw something of the peculiar nature of value. We discovered that in many cases a larger production of a given commodity brought fewer dollars for it. If a larger production brings a lower value, there will naturally be pressure to reduce the output. In a world such as ours which has an enormous productive capacity, this pressure may take the form of monopoly agreements of one kind or another. The old economic theory assumed that if too much of one article were produced relatively to others, the price would fall and capital and labor would move to other fields. If, however, there is price setting or price agreement or any form of monopoly control, the old theory breaks down.

In former times when it was relatively difficult to produce too much of any one article, perhaps no measures of social control were necessary. In the modern world of enormous productive capacity, conditions are entirely different. With the great ease of overproducing in one field as compared with others, the tendency is to set up some kind of monopoly control and protect price by this means. This is true of many of the schemes of control organized under government supervision. It is even more true of many of the "combines," "cartels," and other types of consolidation of private business. These methods attempt to increase value by reducing amount. The road to economic welfare demands increasing production, and if necessary the movement of capital and labor to other and new fields. This process should continue until everybody gets everything he wants. This means that

there is no excuse for the present policies of arbitrary limitation, be it under private auspices or governmental supervision. He who understands something of our great productive capacity and the pressure toward limitation of output created by our peculiar theory of value, is well on the road to understanding the economic order. Monopolies in the past have had a very unfortunate connotation to the American public. But if they are supplemented by proper controlling and planning bodies, they may indicate the way to future economic progress.

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CHAPTER VIII

THE STORY OF OCCUPATIONS

What Occupation? The question of what occupation to follow is one of the most important that any individual has to decide. The problem takes on even greater significance when applied to a whole society. One of the crucial problems economic organization has to face is what the distribution of the population among occupations in a given society will be. Upon the answer to this question will largely hinge the economic welfare of the group concerned. In the early days of economic development each individual or small group had to provide himself or itself with all of the necessities and conveniences of life. This, of course, meant that everyone did essentially the same things. Life consisted almost entirely of providing a veritable minimum of food, clothing, and shelter.

Dividing the Work. One of the great discoveries of the human race is that an increase of production can be obtained by specialization in work. Adam Smith, one hundred fifty years ago, listed many of the advantages of the specialization and division of labor. Prominent among these advantages was increased productivity and efficiency in the job to be done. Among the disadvantages was the increased difficulty of obtaining a balance in the different kinds of work performed.

As soon as one part of the world, or one group of individuals, begins to specialize in one commodity or in one type of

service, there is always the possibility that too much or too little of that particular commodity or service will be provided. Some countries even now obtain their chief income from one specialized commodity. To assure the correct proportion of their supply to the demand of all other countries in the world, it would be necessary for each to know just what its demand would be. If most of the coffee of the world is to be produced in Brazil, much of the rubber in the East Indies, and much of the sugar in the West Indies, some scheme must be invented to see that approximately correct amounts of each of these commodities are produced. This means that there must be some method by which the people producing can estimate the amount needed. This, of course, should determine the number of workers needed in each field.

When any productive society reaches an advanced stage of specialization in commodities or services, it constantly faces the issue of the occupational distribution of its population. This is one of the most important economic questions facing any highly specialized productive society.

If too many people are raising wheat either they will have to decrease the amount each individual raises or else there will be too much wheat raised and a very low price. One Secretary of Agriculture has gone so far as to say that "the American farmer would be better off if he would raise four bushels of wheat where he now raises five." If he could raise five, but arbitrarily decreases the amount to four, the whole society is poorer. Would it not be far more sensible to have four wheat farmers where you now have five and allow each one to grow as much as he could?

The same difficulty arises in connection with each occupation. How many people should be in the occupation? If

every occupation faces this difficulty the question might be asked: Why has not a satisfactory solution been evolved before this time? It is surprising that so little consideration has been given to a question of such great importance.

The question of occupational distribution is of basic importance (1) in determining wages, (2) in reducing unemployment, (3) in stabilizing business, (4) in increasing the total productive capacity of a society, (5) in providing a method of social improvement, and (6) in bringing about real freedom.

Wages and the Number in an Occupation. Occupational distribution plays a crucial part in determining wages in any field. If there are too many people in any occupation, wages in that field are almost certain to be low. It makes no difference what the standards of training or the requirements of entrance into the occupation happen to be. The occupation may demand a college degree; it may demand years of study beyond this. If for any reason there are too many people entering the occupation, wages will be low.

The same is true for the other side of the situation. If there are not enough people entering an occupation, wages in that field will tend to rise. Careful study extending over many years substantiates the position that the number of people in an occupation in relation to the number needed largely determines the remuneration. Many people would like to maintain that because their income is high their occupation is important. But in our money economy where we rely upon price, such contentions are without foundation. The question of numbers will determine the remuneration whether it be applied to doctors, to bricklayers, to school teachers, or to any other group.

This is readily seen in the case of farmers, because if farmers are raising so much wheat that wheat can be bought for fifty cents a bushel, it will not be possible to sell wheat for a dollar a bushel. If the people on the farms are not getting an adequate return for growing wheat a sensible procedure would be to limit the number of people growing wheat. The same would be true in any field where the remuneration is low as compared with other occupations. Limit the number of people and go on limiting until an adequate compensation is received. Obviously, the belief of the group involved cannot be accepted as an accurate determination of what is adequate compensation.

Unemployment and the Number in an Occupation. Incorrect occupational distribution is unquestionably a large factor in causing unemployment. If the numbers attached to a certain industry are too large to be employed, unemployment will automatically result. If you have 600,000 coal miners and if 300,000 could mine the coal that the country needs, you will have 300,000 unemployed miners, distribute the unemployment as you please. You may have 300,000 working all the time and 300,000 totally unemployed, or you may have 600,000 working half the time, or you may have any other number of combinations. The essential fact remains that too many people in any occupation will inevitably cause unemployment. The argument is not quite so clear on the other side; namely, that the correct number of people will abolish unemployment. But there is every reason to think that it is a prerequisite to this end.

Business Stability and the Number in an Occupation. Correct occupational distribution would be a substantial factor in stabilizing business. It would go far toward equal-

izing and stabilizing wages in different fields; the degree to which wages are equalized and stabilized plays a large part in business stability. Booms and depressions are caused in large part by shifts in capital and labor that are not planned for. Unduly high wages or prices, whether they be in Florida, in Detroit, or on the coffee plantations in Brazil, tend to create maladjustments in our economic life.

Production and the Number in an Occupation. The total production of society could be greatly increased by proper occupational distribution. For instance, if you have so many people in agriculture that some of the people must reduce their production in order to sell what is produced, it seems self-evident that moving some of these people to other fields would increase the total productivity of society. If there are so many people in any field that there has to be artificial limitation in the output, society as a whole suffers. It would be far better to reduce the number of people involved and then allow the resulting number to produce to the maximum. It must be borne in mind that it is virtually impossible to satisfy all the wants of everybody, and, therefore, that there is no limit to the work that needs to be done. A superior intelligence has enabled man to solve the problem of satisfying pressing present wants. No sooner were these problems solved than the same superior intelligence presented new wants. Throughout man's whole history the gratification of one desire has led not to contentment with things as they are, but to the discovery of new desires.

Economic Justice and the Number in an Occupation. Correct occupational distribution will go far toward improving the condition of the economically unfortunate members of society. There seems to be no one step that

would do more to improve this condition than to see to it that the distribution in every occupation is correct. There is the further advantage that this would bring about as nearly equal wages as can be brought about within the limits of our pricing system. This policy would probably do more to bring about a fair reward for economic effort than any other step that could be taken within the limits of our economic order.

Freedom in Relation to the Number in Each Occupation. Perhaps the most important result of planning occupational distribution would be the bringing about of real freedom of occupational choice. One of the basic assumptions of our economic order is that there is approximate equality of opportunity to enter any given occupation. This condition existed in a greater or less degree when practically everyone wished to go into farming and when free land was available to anyone who wanted it. It is of very great importance for us to realize that if we are to have a freedom that has any meaning, definite social planning will be necessary. No longer can we assume that every occupation is open to every child unless more definite steps are taken to make this statement true than have been taken in the past. No one who studies the actual conditions in America can maintain that we have equality of opportunity to enter any of the different occupations at the present time. The barriers to all occupations must be removed, the number needed determined by an expert group responsible to society, and the necessary financial provisions to enter occupations provided for all who ought to enter. These things must be done before we can justify a claim to equality of opportunity in this country.

Income of Occupational Groups. If any further proof is needed that there is not free choice of occupations in the United States, it could readily be obtained from a study of the income in different occupations. The most desirable occupations have the higher income and the most unpleasant work pays the lowest wage. The full meaning and force of this argument does not appear until one proceeds to examine the detailed figures regarding earnings in different occupations.

According to our calculation, the average annual earnings of unskilled labor in prosperous years is only about $900. This, on the average, is perhaps the most unpleasant work that is being done in America at the present time. On the other hand, the income in such a profession as medicine or engineering averages over $5000 a year. These are two of the more interesting types of occupation. The occupations that fall between seem to arrange themselves so that the least unpleasant are the most highly paid. Even such poorly paid occupations as journalism and the ministry seem to have a larger annual income than skilled labor. And as poorly as teachers are paid, they seem to be much better off than the average of people doing very unpleasant work. When it is remembered that the great majority of teachers are women, the evidence does not seem at all clear that even teachers, underpaid as they are from one standpoint, are not in a privileged position. In fact, there seems to be nothing that would go further to destroy the fiction of equality of opportunity in the United States than the study of occupational income.

We are not unmindful of the claims that are advanced in justification for paying high wages in medicine, engineering,

and other fields. We are told that it takes a long period of training and that it costs a great deal of money to get the training. But if some people have the money and some do not, there certainly is no equality of opportunity. That is our only question at this time. Whether a society desires to have equality of opportunity is an entirely different matter. But if it does so desire, it should at least make some consistent effort in that direction or else give up the pretense.

After looking at the major occupational divisions, if one is still skeptical regarding the inequality of opportunity, one may get further information by two other investigations. One may examine the unearned income and its distribution and see the cases where, through no effort of their own, people have yearly incomes of a hundred, two hundred, or five hundred thousand, or even a million dollars. A substantial proportion of all the incomes in America of $100,000 or over are due to inherited property. It would be difficult to maintain that the accident of birth could justify this on the grounds of equality. There can be other justifications, but certainly one could never prove the case that there is any substantial equality of economic or occupational opportunity when one individual comes into the world heir to a million dollars and another comes into it heir to a millionth of a dollar or less.

A more detailed study of the distribution of income within the larger income groups would perhaps prove even more enlightening. A recent investigation has shown that the women employed in industry in the state of Virginia earned an average weekly income of $12. This was in the days of prosperity. The average probably falls to $6 or $8 in a year of business depression. A substantial proportion of these

women have to support themselves. In one of the cities studied more than a third of them were not only supporting themselves on the basis of this meager income, but were also contributing to the support of someone else. In another city investigated, the average income of seven hundred employed girls in the prime of life, between 20 and 30, was only $9 a week. When these girls were interviewed as to how they managed to live on such a sum and in particular how they managed to have any recreation, the replies were startling. A surprising number of them said that their greatest pleasure came from simply working with other people. Some of them suggested that even wrapping packages or being with crowds of people was their chief enjoyment.

We do not contend that such a life is not perhaps just as sound as one that demands more sophisticated amusement or pleasure. In fact, there is much to be said of a life in which happiness comes from the work that one does. But this does not change the fact that there is no sign of equality between an individual who must live on $9 a week and get his major amusement from working with groups of people, while someone else more fortunately situated can teach school for even $100 a month, or someone in the professions can make $200, $300, or $500. It is absurd to compare the situation of the person living on $9 per week with that of someone who, without ever having done any constructive work in society, has the benefit of an income of $10,000 or $20,000 or $50,000 a year. Whatever justifications there may be for such a world, they certainly have nothing to do with equality of opportunity.

A study of the limitations and special privileges of occu-

pational groups would prove one of the most enlightening chapters in the life of any country. If any society is to take or make the claim of equality seriously, definite, continuous, and substantial steps will have to be taken to see that there is reasonable equality to enter occupations. And in the twentieth century this cannot mean a negative attitude or doing nothing. It must include the positive program of setting up planning commissions, providing information, removing barriers to opportunity, and making preliminary preparations for correct occupational distribution.

Schools and Planning the Number in Each Occupation. A social order such as the one existing in the United States has certain very definite means to plan the occupational distribution of its population. Among these means is a school régime that practically everyone goes through. Such a regimen could do much to determine the occupational distribution of the population. But what has been the effect of the school system upon the distribution among occupations?

It seems to be fair to say, in the first place, that those in charge of the educational system have had little vision and grasp of the possibility that the school system may facilitate a correct distribution in the different fields of work. We are not unmindful of the fact that the more enlightened school systems make at least a pretense of having an organized system of guiding the pupils from the occupational standpoint.

Practically all of this work has been done on the assumption that there is something in the nature of the individual that could be measured or found that would tell what occupation he should take up. There is little evidence, however,

to support this assumption. All the facts seem to indicate that practically anyone of sufficient ability could become interested in almost any occupation, given the proper social situation. This is no criticism of the guidance that has been given, but it is a plea that any program of guidance consider the social needs at least as much as the so-called interests of the individual. This is not stating that there are no differences among individuals and that these physical or mental differences might not make some difference in the efficiency with which individual jobs or occupations could be performed. But for most of the occupations in the world and for most of the people, the important consideration should be the social needs and desirability of reasonably correct occupational distribution.

The schools, then, have it in their power to bring about something closely approximating correct distribution of the working population through what may be called vocational enlightenment. This social program supplemented by a program of attempting to get each individual into a particular field where he may work most efficiently should go far toward improving the schools as an economic asset. It is more than doubtful whether a large part of the education given today is at all significant in the economic world. This, of course, is not to say that schooling should not be provided for other than economic reasons. There is no reason why the school should not take over this guidance obligation. If schools are to discharge their economic function in the life of America, they will have to do so.

Education and Income. One of the current myths prevalent in the United States is that higher education greatly increases the earning power of the individuals who get the

education. Part of this same myth is that education is completely free; therefore, if education increases earning power and education is free, any individual has it within his grasp to improve his condition as much as he pleases.

There are two important fallacies in the argument. The first is that education improves the economic condition of the one who gets it. This fallacy has grown up in the United States largely because only the more fortunate and more able people managed to get an education. Consequently, people who had education were the more fortunate and able people. As a result, they fared better economically. But when we take people of the same degree of social and economic opportunity and the same intellectual ability, there seems to be little to indicate that formal schooling beyond the rather modest amount provided by the secondary school necessarily makes for greater economic efficiency.

Is Education Free? The second fallacy is that education can be obtained by anyone. We shall comment on this at length in the next chapter. Education can be obtained by the very able individual or the very fortunate individual. It is not equally obtainable by people of the same degree of ability who have widely differing amounts of money. Expensive schooling, then, doubtless remains a real barrier to correct occupational distribution and any society that seriously attempts to distribute its population in the most productive way will doubtless proceed very quickly to make education completely free for all people at all levels. Steps should be taken to see that the opportunity for free education is not abused. However, there is no reason to think that people will spend too much of their time going to school rather than engage in some productive activity at a

high return to themselves simply because the schooling is free and that they are being supported by society while studying.

Trade Unions and Occupational Distribution. There are many artificial barriers and limitations to occupations in this country. For some reason those established by the trade unions seem to be the most commonly mentioned. They are probably not the important ones. In spite of the fact that ultimately all the barriers to occupations should be abandoned, no group is justified in removing its barriers until society takes over the total problem. And although it is highly antisocial for a carpenters' union or a plumbers' union to limit the number of people entering their respective fields, it is economic wisdom for them to do so in our competitive society. Until society is willing to set up definite machinery to plan the number entering every field, neither the carpenters nor the plumbers should be criticized too severely for limiting the number entering their groups.

If society is to be so organized that every group must look out for its own interests and exploit the rest of the society, then the conditions of the exploitation should be frankly stated. Each child should be given the facts so that he may use his greatest ingenuity to get into the group of the greatest fighting strength. To put it mildly, it is dishonest to advocate the theory of equal opportunity as we do in the United States and then to construct a social order that operates only on a principle of each group for itself and each individual for himself.

Natural Interests and Occupational Distribution. There is one final objection to planning occupational distribution

that should be answered. There is a prevalent notion that there is a natural interest or desire in most people to enter particular occupations. If each individual came into the world with a predetermined and inevitable liking for a certain occupation, there might be very little that a policy of social guidance could do. However, widespread though the belief is that people are naturally inclined to certain occupations, there is little evidence in its support. On the other hand, there is a great volume of material to support the view that the human being comes into the world devoid of occupational interest and with a range of capacity that will allow him to enter any one of a great variety of occupational groups. There may be a shortage of very specialized innate mathematical ability or of certain artistic abilities, but with these and a few other exceptions, there seem to be almost no shortages that have been definitely discovered.

It is quite true that most people have very decided feelings about the occupations they would enter. But when such feelings are analyzed, they are in almost every case a product of the social environment and of the desirability of the occupation. Of course, hundreds of thousands of boys wish to enter medicine or engineering or to become aviators. A careful study of the situation seems to show that it is the high wages, the public esteem, the pleasant working conditions, or some similar factor which characterizes the occupation that determines this choice. It does not seem to be any native desire for one kind of work except in a very small percentage of the cases. In summary, then, there seems to be nothing in human nature to prevent correct occupational distribution, once a society determines to get it. An im-

portant step can be taken by any society to improve economic welfare by setting up an organization that will bring about correct occupational distribution.[1]

A plan of the number of people in each occupation should be prepared by the school people working with other groups. This plan must consider the advantage of all groups. It should start from the assumption that all the people will be used to do all the work. This would make it impossible to have unemployment. The number to be in any particular occupation will be determined in the interest of the entire population and not of any particular group.

A manual of occupations should be prepared in each community. This should include such items as the following: the number of people in each occupation in the community; the number at various times in the past; the most probable number needed in the future; education required to enter each occupation; the average wage per year and during the working life; conditions of work; ability required for success and advancement; unemployment over a period of years; method of entering occupation. There should be a manual giving the same information on a state-wide basis and one on a nation-wide basis. In other words, there should be an occupational plan for the country and for each community. These plans must be prepared in the interest of the whole population and not of any particular group. When the teacher has this assistance, he will be able to see that the schools play a real part in using all the people to do all the work and at the same time increase the freedom of the individual in choosing his occupation.

[1] In a book by the author, *Economic Theory and Correct Occupational Distribution*, Teachers College, Columbia University, 1931, further evidence is given about the feasibility and desirability of accomplishing this.

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CHAPTER IX

MONOPOLY OR FREE SCHOOLING

Monopolies in Schooling. Monopoly comes very close to he schools at one point. Will education be made free or will particular groups have more or less of a monopoly of it? The issue is extremely important. If education is free in a given society, a much better claim of equality of opportunity can be made than if it is not free. It would be unfortunate if any particular group managed to get control of a given kind of education. The tendency might well be for this group to take the same attitude that any other economic group would take and attempt to build a monopoly. The solution does not necessarily mean no guidance and no control of the number to be trained in a given field. As in the case of many commodities and services, some control of output will be set up. The chief question is: Will the control be in the interest of the entire population or of the particular group? A great advance will be made if the people interested in schooling will discuss the issues of whether education should be entirely free and of who should determine the number of people to be trained in any given field.

Are Schools Free? It is a very common thing for people to point to the elementary schools and to the high schools in a given community and to say that they are free schools. The basis of this popular belief rests in the fact that generally one can attend such schools without paying any tuition fees. The fact that during a large part of the past history of formal

schools fees were charged to attend them has led many people to think that the abolition of these fees has established completely free education. Unfortunately, such is not the situation.

It is true that in most communities in the United States one no longer pays fees to attend even a secondary school. It is also true that in many communities even the books and necessary supplies are furnished. This, however, falls far short of free education.

It may be argued with some basis of fact that coconuts are free. It is undoubtedly true that there are places in the world where one can obtain the coconuts simply by asking for them or by taking them, since there would be no one to ask in many cases. To everyone who is in a position to go to such places and avail himself of the opportunity, coconuts are undoubtedly free. Just so with those who are in a position to avail themselves of the schools which they might consider free. But there are millions of people in the United States who are not in a position to avail themselves of these educational opportunities without undue sacrifices. In other words, to take advantage of a "free" education we demand unreasonable sacrifice on the part of the children, or on the part of the parents, or on the part of both. It is important to keep in mind that by sufficient sacrifice many people could go where coconuts are free. But it is questionable whether this gives us the right to say that coconuts are free. Just so it is more than debatable whether we are justified in saying that these schools are free when it necessitates unreasonable sacrifices on the part of many people to send their children to them. It not only entails severe sacrifice in many cases, but in some it is an absolute impossibility for many

children to take advantage of these educational opportunities unless their parents happen to have a certain minimum amount of money. It is somewhat ironical to speak of something being free when you have to have money to obtain it. There is perhaps even a more subtle element of irony when you have to have money to get in a position so that you can take advantage of so-called "free" activity or service.

What Is a Free School? We submit the proposition that no school and no education is free until an individual who does not have money, or whose parents do not have money, can attend that school or obtain that education. We would not deny that one could make an argument in a formal or technical sense to the effect that a school is free even though one must have large sums of money to fulfill the conditions necessary to avail himself of that education. But if the word *free* is to have any vital meaning and significance in terms of the present world, the conditions stated above must be met. Perhaps no society in the world before the present generation ever seriously considered the implications and possibilities of free education.

The results that would follow from the adoption of an adequate program of free schooling would be vastly beneficial if the schooling were planned in terms of the economic and educational needs of society. It is very important, however, to keep in mind that at the present time perhaps the major part of the cost of education is being borne by private individuals, and by the families of the children involved. There is considerable evidence to show that the cost of supporting the child, providing him with necessary food, clothing, shelter, health, and other items, is substantially greater than the cost borne by society for providing the

school. If the family is easily able to bear this expense, no harm is done. A brief survey of the facts, however, will almost immediately convince one that a large proportion, perhaps the actual majority, of families in the United States are not able to stand this expense without very real sacrifice.

It is all very simple for people whose family income is $3000, $4000, $5000, or even $10,000 a year to assume that $100 or $200 spent in supporting a child while he attends a secondary school for a year is a matter of minor importance. For the family at the $5000 income level, it is of minor importance even if there are three or four children, although the cost might be felt in this case. The important consideration, however, is the fact that according to the best calculation we have, the average income of the 27 million wage earners in the United States is $1200.[1] It is true that many millions of these do not have families to support. But on the other hand, many millions do. He would indeed be an optimist who would say that you could take out $100 or $200 per year from an income of $1200 without making a very real difference. Sending a child to secondary school in this case demands a sacrifice that society has no right to ask of any family.

Results. One of the results of lack of free schooling in the United States is that millions of people are in the lower-paid occupational groups, such as unskilled labor, and in the lower grades of clerical occupations. In a large number of cases such conditions reflect not at all upon the ability of the people involved. They are a reflection upon a society that holds sacred a myth that free education is being provided. Until this myth goes the way of other superstitions, a really

[1] This was the situation in a relatively normal period such as 1925–28.

adequate and planned program for the occupational and economic development of the country is impossible.

The situation at the higher levels of education becomes even more crucial. It could easily be shown that the cost of necessary food, clothing, and shelter while one attends college, in many cases, is far more than the amount of tuition charged. Other things equal, a society in which tuition is not charged in institutions of higher education is preferable to one in which it is. But simply because there are state universities which provide an inadequate range of educational opportunity and charge little or no tuition for these opportunities, these states should not claim that they provide free higher education. The cost of higher education in many cases is far larger to the individual than the cost to society in so-called "free" higher institutions.

The argument might be advanced with some show of reason that during the younger years of the child's life, the family would have to support the child in any case and that sending him to school causes little, if any, additional expense. For the lower-income groups there doubtless is an additional cost even in the form of clothing, perhaps even of food. The argument may not be so sound when the child is below the age at which he could contribute to the support of the family. Even on this lower level, however, the economically wise society will scan the argument with very great care. Under no circumstances can society afford to allow defective training because of financial disability.

Does Schooling Increase Income? One of the most commonly used arguments for going to school has been that earnings are thereby increased. Where, indeed, is the high-school principal who has not told his pupils that they would

profit financially by going on in school? Many people have accepted the argument and acted upon it. We have seen in a previous chapter the fallacy involved in this argument. Whether you get an increased income from schooling depends very largely upon whether few or many other people use the schooling to enter the same vocation which you enter. As Irving Fisher so well stated it, the establishment of trade schools may actually lower the earnings of those in a trade. It is even conceivable that people who receive a trade education will be sent into trades that are more overcrowded than those which they would have gone into had there been no trade school. In that case their earnings will be less because of the schooling. Theoretically, the same situation might develop in many fields. As has been pointed out, this is not an argument against schooling, but it is most emphatically an argument against an unplanned, unco-ordinated school system. There is no more reason to think that various amounts of any kind of schooling are equally advantageous than there is to think that various amounts of any other kinds of economic activity are equally desirable.

Why Plan the Number to Train? With the breakdown of the old economic reasons for providing facilities for universal education, new reasons must be found. Fortunately, the same line of reasoning that makes us very suspicious of the old reasons leads to what look like fairly sound justifications for free education. That society should provide free education is justified by the very simple reason that it benefits from so doing. If medical training were made free and if an adequate number of doctors were trained, the members of the profession would not be those to benefit, but all of the rest of the population would benefit in regard to medical

charges. The same would apply to engineers, to the skilled trades, and to any other of the occupational fields. Only the people in a given occupation would benefit by having a small number of people trained for that field. It is all other groups that should be interested in expanding and enlarging training facilities.

Strange as it may seem at first thought, if the agricultural college is to overexpand agricultural products, the city dwellers may be the only ones who will even temporarily benefit. Certainly the cities stand to benefit more from an overproduction than do the rural districts. On the other hand, the farmers might benefit from a new process that would reduce the price of clothing or the price of farm machinery or the price of commercial fertilizers.

The complete argument is not quite so simple as this because in the long run even other groups would be likely to suffer from too serious a maladjustment in any one group. The situation in regard to agriculture is in point. The cities may benefit temporarily from agricultural prices below the cost of production in many cases. In the long run the unbalanced economic life will prove less helpful even to the cities than would a carefully balanced and planned procedure. The really desirable tendency is toward constant planning and readjustment so that the returns in all occupations and all industries will be the same. This seemingly simple procedure provides the clue to the solution of some most difficult problems. It enables us to decide what is a fair wage. It tells us when there are too many people in a given occupation. It tells us when one industry is overexpanded in relation to others. Wages are fair when people of the same ability get the same wages in all occupations. We have

the correct number of people in each occupation when this situation exists. We have the best available distribution of capital when the return is the same in all fields.

Why Free Schooling? Without free schooling a desirable distribution among occupations would be difficult if not impossible to obtain. It would be difficult to get fair wages. It would be more difficult to get the proper distribution of capital. Free schooling, if properly planned, can go far toward bringing about these conditions and thereby tend to maximize the national dividend from expenditures for schools. All other groups benefit from adequate training for any one group if the correct number of people are trained. For this reason all other groups should see that adequate training facilities are provided for every group.

This, of course, applies to all agencies of education that relate to production. This probably means a generous amount of education, perhaps equivalent to the present secondary school, for everyone, and after that highly specific schooling for many different types of people, some few of whom may go through a general procedure somewhat like the present scheme of advanced schooling. Almost everyone will have definitely in mind some occupation toward which he will be centering his efforts. There will be no effort, of course, to confine one to the same occupation for his entire life. Adequate opportunity will be offered for later additional training at all periods of life. In fact it is just as much the economic duty and opportunity of society to provide schooling for people of fifty years of age as for those of fifteen. The time will come when education will be thought of as one of the instruments of continuous social readjustment rather than as something to be endured through the early years of one's life.

The Largest Income for the Country. The argument is very clear: If it is desirable that the income of the entire country should be the largest possible amount, all labor and capital should be placed where it will produce the largest amount. This means that the "marginal return" for all uses must be equal. Otherwise some people or some capital should be transferred to a place where they can get larger return. This will naturally increase the total. It is evident, then, that if we wish the national dividend to stand at the maximum, each unit must contribute its maximal part. To effect this, the removal of artificial barriers to the movement of capital and labor is necessary. Perhaps the most important of these barriers is the lack of adequate educational information on the part of the laboring group. It automatically follows from this that if the income of the country should be the largest possible, completely free schooling must be provided for everyone at all levels. For one to be forced to this conclusion, it is only necessary for one to admit that it is desirable to have the income of the country as large as possible.

Other Results from Free Schooling. There are many other results that would tend to flow from an adequate program of free schools. One of the most important of these would be a tendency to equalize wages in many fields. At the present time, one of the most important reasons for relatively higher wages in certain occupational groups is the fact that monopolistic advantages and privileges are held. These interfere with the maximum income of the country. The removal of these barriers would tend to equalize the earned income.

It is obvious that this alone would not equalize all income

nor even bring it to a degree of equality that many people would consider defensible. However, it will at least help to live up to the theory which we have been advocating in this country—the removal of artificial barriers and the giving of equal opportunity to all.

If, then, we desire the largest possible income for the entire country, there is no other alternative but to provide entirely free schooling. This will be done not primarily for

TABLE XII—ESTIMATE OF NUMBER OF PEOPLE GETTING SCHOOLING IN 1935

Kind of Schooling	People Getting Schooling
Preschool	750,000
Elementary	20,100,000
Secondary	7,000,000
Higher	1,250,000
Adult	12,000,000

the benefit of the individual who receives the schooling, but because all groups will benefit. This will also tend to bring about many other results that have been considered of great value in many societies. Among these will be at least a slight tendency to cause a more nearly equal distribution of unearned income.

Free Schooling at All Ages. Table XII shows quite clearly that schooling is not available for large sections of the population. It would take large sums of money to make education available at all age levels. We have seen in the earlier part of this chapter why it is economically wise to make education entirely free. Doubtless some of the education, particularly at higher levels, has no economic significance. Much of the so-called cultural education, as valuable as it may be for other purposes, has little significance in the economic world.

This, of course, does not mean that such education should not be provided. It simply means that it should be considered on its merits along with any other consumption item. Education in music may not have economic significance for most of the population, yet such education may be of great importance for other reasons.

At all levels education should be provided entirely free if it contributes to the economic or occupational efficiency of the individual. There will be wide differences of opinion regarding the specific items that enter into vocational efficiency. However, the arguments are likely to be over mat-

TABLE XIII—ESTIMATE OF THE MONEY SPENT FOR SCHOOLING IN 1935

Elementary	$1,200,000,000
Secondary	800,000,000
Higher	600,000,000
Adult	120,000,000

ters of detail. The evidence seems to be clear that in general all education leading to one's occupation should be entirely free. This would assume free education in the preschool and in the elementary school. The occupational needs of the country are such that as many people as possible should be encouraged to go on to the secondary schools. This would mean completely free secondary education. All phases of higher education that have to do with occupational preparation should be free. This is solely in the interest of society at large in the effort to get the correct number of people in each occupation. A relatively small proportion of adults have any adequate program of education provided for them.

Can We Afford Free Education? We come now to the question of whether or not it would be possible to support a

program of completely free education. We should probably have to double and perhaps triple our expenditures before any valid claim for really free education could be supported. Would it be possible to make an annual expenditure of from six to ten billion dollars for schools? Many would be inclined to say, without further consideration, that such an expenditure is impossible. As we have shown earlier in this chapter, completely free education is the only way to make the income of the country the largest possible amount. If the educational program is well planned for the particular economic needs of the society, we would have no hesitation in saying that we can afford completely free schools. In this country a program of free education properly planned in terms of our economic needs should add to our income many times the ten billion dollars which it would cost. This assumes that the program of education is planned in terms of the economic needs of our society and especially that it guides the people so that we can always use all of them to do all the work. No longer is it a question of whether we can afford free education. We must have it if we are to operate our economic life to maximum efficiency.

If we decide to have free schools, we might well change many parts of our program of support. The area from which money for schools is collected might well be enlarged. A large part of the money might come from the state or even from the nation. However, this would be unwise unless the states plan their economic development. Many very poor districts should be purchased by the state and turned into state forests or used for some similar purpose. In other words, there will need to be adequate economic planning. This will be necessary if we are to have the economic resources for

free education. If, in turn, the education helps to plan our economic life better, it will return many times what free education will cost.

Place of Cost in Economic Life. There are approximately a million people employed in education in the United States. If we assume there are about fifty million people who should be classified as normally gainfully employed, those working in education would constitute about 2 per cent of this total. If we make an allowance for those employed indirectly in education, that is those engaged in the construction and operation of buildings and all similar processes, we should raise the total number considerably. When all of the additions are made, we should probably still find that between 2 and 3 per cent of the workers of the country would be engaged in education.

The total value of all property in the United States has been estimated at about 350 billion dollars. Accurate estimates of the value of all school property are difficult to obtain. An estimate of between six and eight billion dollars would appear to be reasonable in the light of all of the facts. This would seem to show that between 2 and 3 per cent of the total wealth of the country is devoted to educational purposes. In 1929 the total income of the country was approximately ninety billion dollars. Expenditures for education were approximately three billion. This would indicate that about 3 per cent of the income of the country went to education during this prosperous year. The situation changed greatly by 1933. Income had dropped to perhaps not much more than forty billion dollars. Expenditures for education were substantially in excess of two billion. This would seem to indicate that from 5 to 6 per cent of the income of the

country was devoted to education in this depression year. It is interesting to note that expenditures for education ranked relatively high in the list of those items that are maintained during difficult times. As the chapter on consumption shows, however, there are many other items that suffered much less than education.

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CHAPTER X

ECONOMICS AND MORALS

The Morals of Scarcity. We have a moral code that was built and developed in a world of scarcity. In that world the good citizen was he who divided his substance and gave part of it to his less fortunate neighbor. At the time such doctrines were preached they were essential. Through practically all of the history of mankind suffering, want, and privation were the lot of a large section of the population. Perhaps it was not until the introduction of new machinery in the nineteenth century that adequate food, clothing, and shelter could have been provided for the entire population. It may not be extravagant to say that until 1850 some part of the population had to go hungry and without adequate clothing and shelter. With the best intention in the world it could not have been avoided. There simply was not enough and no available arrangement of resources could have produced enough. In such a society of scarcity the moral code of sharing with an unfortunate neighbor or even a stranger was imperative. It was an ideal worthy of the most exalted place in the scheme of human kindness.

Today is there not a higher ideal? In the fourth decade of the twentieth century it is possible to abolish want from the face of the earth. No longer is it necessary for anyone to go hungry or without sufficient clothing or food or shelter. The physical capacity of production of the world today is more than enough to provide for all human beings. We have

the potential power, then, but we have not used our ingenuity to evolve a system that will run our mechanical plant with maximal efficiency. What is far more serious at the present time, one can be a good citizen and yet feel no moral urge toward building such a system.

May it not be a far more important moral issue to abolish the need for charity than it is to give charity? We do not wish to belittle the man of historic morality who divided his substance with his more unfortunate neighbor. We suggest that there is a higher moral principle and that is to help build a world in which charity toward an unfortunate neighbor will be unnecessary.

The Old Conception of Honesty. Our historical moral code would put as pressing moral problems honesty, unselfishness, the willingness to share with one's neighbors, and the whole list of negative virtues as they have come down from ancient times. But are these virtues adequate for the present world? Take the simple question of honesty. According to the customary code of honesty at the present time, one individual is not supposed to take wealth that belongs to another. One is not supposed to enter his neighbor's house and walk off with his silver or his jewels. But is it right under the present moral code so to manipulate the stock market that you take your neighbor's property? Is it morally right to act upon inside information in selling a particular stock when you know that someone else who has no access to such information will buy it and thereby lose? Time and time again in the period from 1929–31 people who had advance information regarding the activities of particular companies were able thereby to sell their stock and protect their money. They were "good" business men. But it is well to remember

that someone bought that stock. Many times it was someone without access to the same private information. Is there an ethical problem involved here? Is it wrong to enter your neighbor's house and take his property, but right to take his property by more subtle means? Has the moral code caught up with modern business life? It is more than doubtful.

An unstable monetary unit may take billions of dollars from one group and give them to another group. Is there a moral issue involved in inflation and deflation? One of the most careful students of American economic life estimated that between 1914 and 1930 one hundred billion dollars were transferred from one group to another by monetary inflation and deflation without any service having been rendered to anyone for anything.

This amount would probably sink into insignificance all the property that has been stolen in America from the time the land was taken from the Indians. Still America will build an enormously complicated social machinery to try to prevent the minor theft and do nothing about the major. Our moral code brought down from an age in the past condemns one and condones the other. Our legal system condemns one who receives stolen property. But who of us feels the least compunction of conscience from receiving large amounts from changes in monetary values?

We perhaps borrow a thousand dollars and agree to repay it five years hence. But the thousand dollars is only half as much when we repay it as when we borrowed it. We repay the thousand dollars without a thought. We buy a piece of property and agree to pay $10,000 for it. Because of the inflation of our monetary unit $10,000 is only worth a fraction

of its former value. We pay the same $10,000 and compliment ourselves on being keen business men. Is it not possible that the difficulty is a defective moral conscience and an outworn moral code?

Broadening the Moral Obligation. The individualistic moral tradition of the nineteenth century led many people to think that they could live a good life without considering society. "Rugged individualism" was an important virtue in the eighteenth and nineteenth centuries. But one of the most important economic needs of the coming years will be the expansion of the moral code until it includes a social consciousness and the duty of every individual to play his part in a planned and orderly economic life.

In the past the immoral man has been he who stole property, cheated, and deceived his neighbor. In the future may it not be possible that the individual who endangers the stability of the economic life of the community while seeking his own private ends, even though it be by "honest" means, will be considered far more immoral? May it not be possible that he who gains "success" by the exploitation of his fellow citizens will be considered more antisocial than a thief? May it not be possible that the "rugged individualist" who is unconscious of any social obligation will be considered more immoral than the gangster? May we not expect that neglecting to seek the adequate provision of educational and cultural facilities for all in the community will be considered thoroughly immoral?

This discussion is not an attempt to belittle the historic moral virtues. It is an effort to set them in their proper perspective in relation to present problems. It is a plea that a higher type of morality be developed and that a far broader

conception of the action and knowledge that are necessary to be a good citizen be encouraged. It is difficult to see how we could bring about the economic progress that should take place without great expansion and improvement in our historic moral tradition. Indeed, a far finer moral sense and a much deeper social consciousness must be developed before the promise of Chapter I can be fully realized.

TEN POSITIVE COMMANDMENTS

1. Thou shalt help build a world of plenty for all.
2. Thou shalt help build a world of beauty for all.
3. Thou shalt help build a world where work has meaning for all.
4. Thou shalt help build a world where the burdens of sickness and accident are borne by all.
5. Thou shalt help build a world of such great productive capacity and equality that no man will envy his neighbor's possessions.
6. Thou shalt help build a monetary system that will not steal thy neighbor's money.
7. Thou shalt help build occupational planning commissions that will make it impossible for one occupation to benefit at the expense of others, and that shall use all the people to do all the work.
8. Thou shalt help build a world of freedom where every man shall have access to sufficient material possessions to live a full life.
9. Thou shalt help build a world of such productivity that there will be no necessity for stealing thy neighbor's property.
10. Thou shalt help build a world of such wealth and productivity that man shall not worship material things.

What Can the School Do? From the point of view of this chapter the character education of American schools is obviously inadequate. At present we attempt only the inculcation of moral virtues that have come down to us almost unchanged from Biblical times. The type of character educa-

tion that is needed in the American school is a type that will impress upon each child the importance of playing his part in remaking American economic and social life. If he fails to do this he is the bad citizen.

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CHAPTER XI

TO SAVE OR NOT TO SAVE

In the modern world saving is essentially the use of economic energy in the building of capital equipment such as railroads, factories, machinery, dams, canals, airports, and all the other material things that man can use to increase his supply of economic goods and services. Spending in the usual sense means the buying of consumption commodities, such as shoes and hats, which man needs to satisfy his immediate wants. Whether a society needs more saving is largely a question of whether or not it needs more hat factories, shoe factories, railroads, steel mills, and similar productive enterprises.

In our country saving has always been regarded as a virtuous act. Indeed the ideal of individual thrift and saving has been almost a part of the moral code. The good citizen has been he who saved and thereby made his country wealthier. However, there are some who say we must spend. A committee appointed by President Hoover during the depression of 1929–33 made the following recommendation:

"United national action to encourage every American citizen now employed to resume normal buying, to use available income to purchase goods normally needed and in the replacement of which labor is employed, is a condition precedent to any hopeful program to constructively increase employment, for to continue and further restrict consumption of goods and of expenditures for improvements

and replacements inevitably will offset any and every effort for emergency relief.

"The American people must be brought to realize that by restricting purchases to bare necessities at this time they are further decreasing the volume of business and spreading the catastrophe they so attempt to avert."

One Imaginary Society Saves. Let us imagine a society in which everyone suddenly decided to save twice as much as he had been saving. People in this society had been taught that saving was a desirable activity and that it benefited the country. They naturally expected a great increase in prosperity to result from the saving. But what happened? People were saving money and not buying hats and shoes and coats and automobiles, so factories were forced to shut down. The merchants could not sell, so they discharged their employees. Unemployment became general, and bankruptcies and insolvencies appeared on every hand. The saving that was to have been a good thing seemingly proved a great curse.

Another Imaginary Society Spends. Let us think of another society in which the people had been saving a substantial part of their income, using it to build new railroads, hat factories, and steel mills. They suddenly decided that they would stop saving any of their income and spend all they made on consumption goods. The divisions of business that sold hats, shoes, automobiles, and other consumption goods took a great spurt. Stores were crowded; people were buying; prices were advancing. Many seemed prosperous. But no saving was going on. Gradually the factories that were making these consumption goods wore out and, as there had been no saving to replace these factories, the

society soon found itself without adequate plants for making hats, shoes, and other goods.

One economic order got into difficulty by suddenly increasing its saving; another got into even worse difficulty by suddenly abolishing its saving. How can any industrial order avoid both mistakes—both too much and too little saving?

The difficulty arising from too much or too little saving grows not so much out of the absolute amount saved as out of changes in the rate of saving. If a society has been regularly buying a certain quantity of goods and suddenly stops, economic maladjustments must ensue. However, there is no theoretical reason why any reasonable rate of saving cannot take place indefinitely if it is so planned as not to be subject to violent fluctuations. Theoretically, a society could be perfectly balanced and save 10 per cent of its income. This would mean that the 10 per cent of its total income would be used to build new steel mills, railroads, factories, etc. Another society might be perfectly adjusted by saving 20 per cent of its income. But if the economic order attempts to save 10 per cent of its income in one year and suddenly decides to save 20 per cent the next year, this additional 10 per cent saved will be withdrawn from the 90 per cent of the society's income which the manufacturers, the wholesalers, and merchants had counted on in exchange for consumption goods. Thus 10 per cent of the goods already produced cannot be sold. If merchants cannot sell, they cannot employ clerks. Wholesalers cannot buy and therefore cannot sell to the stores. The manufacturer cannot operate unless he can sell. The result is that a large part of the population is thrown out of work and factories stand idle.

If money is not spent for hats, shoes, and shirts, but is

saved, presumably sooner or later it will have to be spent in building new railroads or hat factories. When this saved money is spent to build railroads or hat factories it may be able to provide the employment for the man who is thrown out of work in the old hat factories. There is no reason why the economic machinery should not operate just as satisfactorily after the new adjustment is made as before. The difficulty comes in making the change.

A society that is economically wise will be so planned that such sudden changes will not occur. It seems to be well within the capacity of modern industrial society so to organize itself that the periodic breakdowns due to over- and underexpansion in industry will be eliminated. If careful research would show that it is necessary to increase our capital plants to the extent of about 10 per cent of our income each year, there is no reason why arrangements could not be made so that approximately this amount and only this amount goes into industrial expansion.

Cannot Sell If People Do Not Buy. The obvious fact is that it is impossible to sell if people will not buy. If people do not buy, our type of economic order breaks down. We had an amazing economic phenomenon in the United States in 1929–33. Millions of people were deprived of their jobs when factories were closed for lack of work to keep them running. At the same time numbers of other people urgently needed the commodities which could have been produced in these factories. The actual need existed, labor was available, and yet factories capable of producing the goods and employing the men were closed. Such maladjustments existed in a society that called itself civilized. Definite steps should be taken to change such conditions.

As an illustration of the necessity of planned saving, let us take a country with an income approximately the largest yet produced in the United States. This would be an income of $100,000,000,000 a year. Assume that there are no imports or exports. Let us make the further assumption that for a period of years $10,000,000,000 has been saved, or, in other words, has been used in improving the industrial plants and equipment of the country. The other $90,000,000,000 has been spent for consumption goods. It is evident that the $10,000,000,000 which is "saved" is really spent, the difference being that it is spent for capital equipment—buildings, new factories, highways, railroads. Once a society becomes adjusted to this relationship there is no reason why it should not continue to advance indefinitely at this ratio of nine to one. If we assume that half of this $10,000,000,000 is necessary to repair and replace the old equipment, this provides $5,000,000,000 to build new equipment each year. Here we have an advancing society (one in which the total income increases) and we have at the same time stable production and employment.

A Thrift Campaign Appears. Let us imagine that someone with a high-pressure thrift and savings campaign appears in this country and urges upon the people the vital importance of saving more money. We assume that the campaign has been carried on with great success and that the people decide to save half of their income, or $50,000,000,000 instead of the $10,000,000,000 formerly saved.

According to all orthodox statements in the past, the country, by increasing its savings, will become a far wealthier country. But does it actually work out this way? Let us follow the illustration. Formerly $90,000,000,000 was spent

for consumption goods. Now only $50,000,000,000 is to be spent for such purposes. Sales of hats and shoes begin to fall off. The merchants stop buying from the jobbers and wholesalers; jobbers and wholesalers stop buying; the manufacturing plants close; people are thrown out of work; poverty and unemployment appear in the land; bread lines and relief committees are set up. The factories already built cannot sell their goods. Much less will the new factories which are being constructed be able to sell their goods. The plan of larger saving that started out to increase so greatly the welfare of society has wound up most disastrously. In our interdependent economic order, saving must be planned in terms of economic need if it is to increase our economic welfare.

This discussion is likely to leave the individual in doubt regarding his duty to save money. Undue saving at certain times will accentuate business depression; not enough saving will ultimately make society short of capital for improvements.

Gone is the old idea of saving as promulgated for a primitive self-contained economy where saving did not have the present social implications that it has in the interdependent economic life of the twentieth century. Is it possible in the world today for the individual to have sufficient information to act intelligently upon this issue? When your attitude toward saving may determine whether your neighbor has or has not work, one can readily see the social factors involved.

Two Roads toward a Solution. There seem to be two major alternatives open to society. It may set up adequate means of providing the individual with advice as to when saving should be increased or reduced. Such a solution would

operate only if people were sufficiently influenced by this advice to save or to spend at the time advocated by this advisory group. The other alternative is to assume that this is a highly technical problem and should be managed by an expert group under social control. Even though it may not be beyond the capacity of the individual to understand and act on correct information, conserving of energy suggests that we make saving a specialized function.

Just as the individual today does not have to understand the technicalities of modern public-health work but can turn the function over to experts in the field who are fitted to control it, so it may be possible to delegate the function of saving to a specialized group. This might be done by forming industry into units, far larger than at present exist. Each of these larger industrial units could take over the function of saving in its own field. The same result might be accomplished by using the framework of our modern corporations. In the old established fields such as steel, for instance, it might be possible to assume that the people in the steel industry can tell when expansion should take place. There might be an advantage in having the saving done by the steel companies and in never having the money taken out of the industry for dividends or wages.

Today most of the income of a corporation is paid out in the form of wages, dividends, and expenses for material. If the corporation wished to expand, it would probably borrow the money from the public by means of issuing additional stock or bonds. On the other hand, it would be possible not to pay out so much money in the form of dividends and wages and to use this additional money for building new plants and equipment. Either method would work. In one

case the money is paid out to workers and investors and is later returned to the industry for added expansion of plant. In the other case the money is never paid out, but is held by the company itself.

It might be argued plausibly that the oil companies could more rationally exploit the oil resources than could thousands of individuals who at present are investing their savings in prospecting for oil. There are obviously many difficulties in this suggestion; it is not being urged. It is simply one direction in which we might start to bring more intelligence into the concept of saving. It is well to know that a large part of the saving in America at the present time is done in the corporations. But by and large it is done without any social plan. The self-interest of the corporation is the dominant factor in determining its policy toward saving.

Financing New Industries. The most serious objection to such schemes on the part of many people would be that it would not adequately provide for the introduction of entirely new industries. If all the surplus money made in one unit of industry were saved for further development of that industry, there would be no provision for the introduction of entirely new industries. There are several ways to overcome this difficulty. One is to bring a planning group into each industry. In addition to this another and entirely independent organization might be established whose function it would be to promote new industries and finance them until they were capable of supporting themselves. This second independent group would, of course, have to work in close co-operation with the established industries.

Developing New Industries by Research. Closely allied with this institution which is to plan the development of

industry could be the elaborate research laboratories of all fields of production. If one is thoroughly convinced of the necessity of rapid change for the continued happiness of the human race, this result can doubtless be brought about with far more certainty by the establishment of really adequate research institutions. Instead of having only one institution like the Bureau of Standards, we might have a hundred. Instead of only a few industries such as the communication industry and the automobile industry and the chemical industry having fair research facilities as is now the case, every field could have really adequate research organizations.

Already a few hundred individual business organizations have established research departments. However efficient any individual efforts at research might be, we can readily understand how a joining of forces would strengthen them. Let us suppose, then, that each large productive unit, such as transportation or food, establishes a co-operative research group. The next logical step would be to have yet another organization composed of representatives from each such production unit. The duties of this group would be to co-ordinate all the production units, decide on scientific grounds when each unit should be expanded, when held to present size, and when decreased.

For those who are convinced that the present scheme is adequately looking after research in all activities, it is well to remember that so important a field as the railroads has no real research agencies, so far as the writer is able to discover. Occasionally, however, some research is carried on in connection with the engineering institutions. But certainly nothing that could be called a comprehensive institution for research in transportation has ever been established. The

lack of this reduces one's sympathy with the plight of the railroads at the present time. They have been unwilling to meet the competition of automobiles, for instance, on the basis of intelligent research.

The Responsibility of the Individual. The problem of saving has doubtless become too complicated for the individual to handle intelligently and socially without assistance. Does this excuse the individual from all responsibility for providing for the future? Most emphatically not! The individual has a double responsibility. First, to discover the inadequacies of the present system and to work toward a better one; and second, he must in the meantime take steps to protect his own welfare. It might be argued on theoretical grounds that there is an element of selfishness in a person's being unwilling to spend his money to keep factories going when he thinks he should save it for his old age. But the danger to the individual in not providing savings for himself is so great that he is justified in protecting himself until society sets up machinery to plan saving and spending.

We are not advocating any particular solution for the problem of saving. We are simply pointing out that the character of the problem has changed from what existed generations ago when our present theory of saving was introduced. A new theory and a new practice will have to be developed to meet the new conditions.

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CHAPTER XII

OUR UNSTABLE MONETARY SYSTEM

The difficulties of saving and of many of our other economic problems are complicated by our unstable monetary unit. Although the progress in developing an efficient monetary unit has been notable, there is still a great distance to go. The history of the development of money is one of the fascinating stories of human progress. It is a long step from the use of animals, stones, shells, or tobacco as money to modern paper currency. But in spite of this improvement there can be little doubt that the monetary system that is here today is inadequate for modern purposes. And the abuse of present monetary possibilities adds to the trouble. The fluctuations of the value of money in Europe during and after the World War were due in large part to the abuse rather than to the use of the present monetary system.

The extreme fluctuations of monetary units after the War well illustrate the instability of our system. One might have saved a comfortable fortune, let us say 100,000 marks in Germany, before 1914. For one in moderate circumstances this would have provided a comfortable income in old age. In terms of dollars the 100,000 marks were originally worth about $25,000. At first the mark falls to half of its former value, and half of the saving is wiped out. As inflation progresses the mark falls to a tenth of the former value and there is only $2500 left. The mark falls to $^1/_{100}$ of its former value and there is $250 left. The mark falls

to $^{1}/_{1000}$ and there is $25 left. Finally the mark becomes so worthless that the 100,000 marks which had formerly been a comfortable fortune will no longer buy a loaf of bread.

This is an extreme illustration of the fluctuation that is occurring all the time in monetary units of value. Even the American dollar which was cherished so highly during the War lost more than half of its value. We were fond of saying that the gold dollar remained a gold dollar. However, it is well to remember that in 1920 a thousand gold dollars would buy only half as much as they would have bought in 1914. Thus the most stable of the major currencies of the world lost more than half of its value in less than seventy-five months.

Changes of the other kind are just as frequent. People who in 1920 contracted debts due in 1935 had to pay almost twice as much in actual value as they borrowed. This, of course, is one of the major causes of the farm difficulties. Farm property was purchased on mortgages during the years of high values when dollars were worth very little. And the loans have to be paid in years when dollars are worth a great deal. There is no doubt, of course, that this is thoroughly unfair. The person who borrowed money in 1914 and paid it in 1920 gained enormously. The person who borrowed in 1920 and paid in 1935 lost almost as much.

Our monetary system looked at from this angle seems more like a gigantic lottery than it does like a satisfactory system of value units. The truth of the matter is that the present monetary units of the world are thoroughly unsatisfactory as units of doing business in the modern changing world. One of the most urgent needs of the present time is for a stable monetary unit so that a debt contracted in

one period can be paid off in later years in dollars of the same value. Many schemes for attempting to stabilize the general price level are being advocated in the world today. Before we discover the most efficient means, perhaps a wide variety of methods will have to be tried. The important thing is that everyone should know that the present monetary unit is unsatisfactory and that a far more stable one should be developed.

We have made great progress in our use of money. In the early days of the American colonies tobacco or furs or perhaps cattle were used as money. During the Revolutionary War we had the famous Continental notes that later became "not worth a continental." The United States had difficulty in evolving a workable system of banking and currency. After trying various national bank schemes all of which sooner or later proved to be unsatisfactory, the Federal Reserve Act was passed shortly before the World War. This proved to be more fortunate than the old national-bank system which would have been severely strained by the war financing. There was little or no flexibility under the old system. The result was that a banking crisis based largely upon a monetary shortage might easily have developed even though business might have been sound.

The present Federal Reserve System has much greater freedom in expansion and can easily meet any reasonable demand for currency. A bank which is a member of the Federal Reserve System can take many types of securities to the Federal Reserve Bank and trade them for currency. In the old days a bank never knew whether it would be able to get currency in case of emergency if it needed it. Now the Federal Reserve Bank always is willing to lend

money under stated conditions. The interest rate at times may be high, but the individual bank knows that it can always get money.

The system represents a most significant advance, but it still is far from satisfactory because it leaves us with a monetary unit just as unstable as ever. The American business man would think it impossible to do business if the pound or yard at one time were just half as heavy or half as long as at another time. Yet this is exactly the situation in regard to our monetary unit. Sometimes it is just half as big as it is at others. It is remarkable that mankind has been able to invent fairly stable units to weigh matter and to measure distance and the velocity of light. And yet it has been satisfied with a very unstable monetary unit. One of the pressing needs at the present day is a public demand that will force our financial and economic leaders to give us a monetary unit that will be relatively stable year after year.

Planning Our Credit Expansion. Most of the money in use today is bank credit. It follows from this that any attempt to control prices must first control the expansion of credit by the banks. A better organized and carefully controlled banking system might succeed in going far to stabilize our monetary system. Long ago we decided that a system of money controlled by the different states could not satisfactorily care for the needs of our country. Yet today, when bank credit constitutes 90 per cent of our currency, we accept unorganized and conflicting control of this factor by the various sovereign jurisdictions of our country.

Planning Capital Expansion. If real control over the monetary system is to be obtained, it will be necessary to

control the expansion of new capital. It has been estimated that in 1929 almost fifteen billion dollars went into new capital issues. As the income of the country was about ninety billion dollars in that year, well over one tenth of income went into new capital issues. If the fields in which this money was expended employed their proportional part of the fifty million workers in the entire country, these investments would have provided the employment for five

TABLE XIV—DECLINE IN CAPITAL INVESTMENTS, 1930–33

All Figures in Billions of Dollars

1930	7.5
1931	3.5
1932	1.2
1933	.6

million people. If there was any great decrease in the expenditures for capital equipment in the years following 1929, one would expect to find a decrease in employment. These capital expenditures did decline. One estimate for the following years gives the figures set forth in Table XIV.

If 5,000,000 people were employed in 1929 in industries dependent upon the money from these new capital issues, it is readily seen that practically all of those people would be unemployed in 1933. This is an indirect way of saying that capital expansion must be controlled. This in turn is simply another way of saying that savings as well as credit expansion must be controlled. Savings must not be so large one year that they overexpand plant equipment. In other words, savings must go on at a rate that can be continued with little variation year after year.

Will Something Be Done? It should not be impossible for a society that has made such remarkable progress in the physical sciences to master the difficulties of its own monetary procedure if adequate research organizations can be set up. In a generation or two the world should be able to evolve some scheme of exchange that will be free from many of the difficulties of the present monetary units. A monetary unit that doubles in value and then is cut in half within a few years cannot be considered satisfactory. Our present monetary system transfers goods and money from one group of people to another without any reason for the transfer. In order to bring about a more stable monetary unit, however, much experimenting will be necessary. Perhaps no one plan already proposed will be thoroughly satisfactory.

Planning of saving or spending and planning the monetary units are important economic goals. The working out of these changes should command the attention of everyone interested in the economic welfare of our country.

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CHAPTER XIII

IS UNEMPLOYMENT NECESSARY?

Why Unemployment? A consideration of economic problems could hardly avoid a discussion of unemployment. Why did the economic machinery of the industrialized part of the capitalistic world break down in 1929? One's first tendency is to pick out one or two factors and say that they caused the depression and unemployment of 1929–33. There may be some one or two factors that had the most important influence or that were the immediate causes. On the other hand, it is more likely that very many different factors worked together to produce the unfortunate situation in which the economic world found itself. It perhaps was a combination of circumstances in which the unfavorable elements reinforced each other.

Effects of the World War. Any survey of the causes of unemployment during this period would have to consider the maladjustment brought about by the World War. Whatever may have been some of the other effects of the War, there can be no doubt that a long series of economic maladjustments were then created from which the world has hardly begun to recover. The ordinary channels of trade were disrupted. Many miles of new tariff barriers were erected in Europe. Moreover, new economic rivalries and suspicions were created. Far more disastrous from the standpoint of economic welfare was the fact that during the War many fields of production were expanded to a capacity

all out of line with the ordinary requirements of the world in times of peace.

Certain phases of agricultural production were similarly expanded. The Food Administration, for example, encouraged great expansion in the wheat-producing areas in the United States. The same situation developed in Canada, in Australia, and in Argentina. These additional supplies of wheat were needed during and immediately after the War because of the decreased production of the Danubian countries and the virtual disappearance of Russia from the world markets. As the supply of grain in Europe returned to normal and as the Soviet Union began to play a rôle in world commerce, a chronic condition of oversupply developed in the United States. Many of the wheat growers in the eastern half of the United States simply could not produce at existing world prices, whereas large sections of the world could. It may take years, perhaps even decades, to abandon the high-cost land and allow the world's wheat supply to be produced in the areas best fitted for this purpose.

Maladjustments similar to those found in certain phases of agricultural production developed in many industries. In Great Britain an overexpansion of textiles, of coal mining, of machine trades, and of shipbuilding during the War left a heritage of chronic unemployment in these fields. It would be possible to go on almost indefinitely pointing out the maladjustments created by the War and the part that they played in disturbing the economic balance of the world.

Other Causes of Unemployment. As important as these factors are, however, there is no reason to think that there might not have been substantial maladjustments in the

course of ordinary business even if there had been no war during the years 1914–18. The particular depression of 1929–33 might not have occurred. However the history of the past hundred years offers us no reason for thinking that there would not have been significant economic fluctuations. Until far better methods of economic control are developed, society will have periodic overexpansion and the consequent restriction.

Many people placed the world-wide fall in prices as one of the most important causes of this situation. Looking at the problem from one angle we are quite justified in saying that falling prices are a very important cause of business depression, because as long as people expect prices to fall they will not purchase as much as they would otherwise. This still further depresses business activity. Again the inflation of prices during the War was an important factor in bringing about the later fall in prices. There can be little doubt that prices were artificially raised during the War, and unless very elaborate social controls had been set up, it was inevitable that some adjustment would have had to be made in prices after the War ended. As only inadequate or no social machinery existed for this purpose, the result has been periodic falls in the general price level. In the United States these price declines occurred principally in the two depressions of 1920–21 and 1929–34.

Changing habits of consumption, the rise of new industries, the decay of others, unsound expansion of credit, the creation of an unwieldy debt structure, and a hundred economic phenomena that are common to dynamic societies are continually producing maladjustments of one kind or another. Up to the present time we have not had any social

machinery to handle such maladjustments in a constructive manner. The general attitude of society in the past hundred years has been to leave matters alone in the belief that thereby things would work themselves out in the best of all possible ways. We hope that by now in the mind of the reader this attitude has been definitely discredited.

The Resulting Situation. Just as there are many causes of economic depression, so there are many aspects of the unfortunate results. From the human side perhaps the most unfortunate of all the effects of economic cycles is unemployment. This curious disease seems to be virulent in all of the highly industrialized capitalistic countries of the West. We might almost say it is as widespread as the interdependent world economy. There was unemployment in substantial amounts in earlier depressions, but in many countries it did not reach the stage of the virtual breakdown of the economic order that it reached in the depression of the early 1930's.

It is easy enough to trace a basic cause of unemployment to an interdependent economy. When one group of people makes hats and another group makes automobiles, and other groups grow cotton, wool, and rubber, there is always the danger that one of these products will be produced in too large or too small amounts—the largeness or smallness having meaning, of course, only in terms of the other quantities produced. When one manufacturing plant is making window glass and someone else is building buildings, a balance must be maintained between the production of window glass and the need for it in the buildings. The same is true in every other field. As long as each individual made everything he needed there could be no such thing as un-

employment. When every man made his own canoes and hunted for his own food, instead of unemployment there were rest and leisure when he had built enough canoes and got enough food.

Is Unemployment Necessary? One would doubtless be justified in saying that an effective means of equitably dividing among all the people the work that has to be done would go far toward eliminating the most undesirable features of unemployment. As one of our keenest critics has said: "Unemployment is that for which the race has been struggling from the beginning." We have been looking for machinery that would do the work of the world. Whenever anyone has attempted to find a simpler way of performing a task, that person has been working to bring about unemployment. Hence, from one angle, unemployment has been one of the supreme goals toward which man has been struggling. Ordinarily, of course, man has spoken of what he wanted as leisure rather than unemployment. The attitude of mind and the conditions under which it develops determines whether it would be leisure or whether it would be unemployment.

Who Is to Blame for Unemployment? No one is to blame. There is no villain in the drama. As much as we like to think otherwise, there is not even a class or a group to blame. The capitalist is not to blame, the banker is not to blame, and, strange as it may seem, even the politician is not to blame. At least they are not to blame from the positive side. It is nothing that they have done that is the primary cause of the trouble. However, one might argue that these and other groups are to blame for what they have left undone.

The banker has assumed that the method of finance pursued by his forefathers must remain unchanged. The capitalist has taken for granted that the existing economic order is the natural or inevitable economic order. The politician may be willing to tamper with this and that minor detail, but he inclines to the belief that the final instruments of social control were evolved certainly not later than the 1780's. All of these groups mean well, but good intentions in the complicated economic order of the modern world are by no means sufficient to bring about satisfactory results.

The broad reason for unemployment is simply the lack of adequate social instruments of control for the age of the automatic machine. The introduction of machinery and its increasing efficiency could be changed from a creator of fear and a curse to a blessing by better methods of social control. The solution is the construction of social devices by which new machinery will shorten the working hours of all the people rather than destroy the work of some and leave others with an excessive amount of labor. This sounds difficult. It is not difficult. It is merely unfamiliar.

Let the Unemployed Work for Themselves. Far-reaching social planning is the most feasible way of solving the fundamental difficulties that beset the economic system. This, of course, will take a long time to arrange. It sounds very well to list new things that need to be done as an ideal solution, but it certainly provides little help for the person who is out of employment. It provides even less bread and milk for a hungry child. What can be done, if anything, as an interim expedient? Any expedient adopted for a short term might have unfortunate long-term consequences un-

less it were very carefully watched. Many plans have been suggested that have merit.

One of the most important is the suggestion made by Professor Graham of Princeton. This suggestion was that the unemployed be put to work for themselves. This seems almost too naïve to be possible. However, the longer one follows the implications, the more it seems a perfectly feasible and important thing to do. If we had eight million people unemployed and idle factories, farms, and shops, there would seem to be little reason why those eight million people could not make many of the things that they need. Certainly the very minimum of food, clothing, and shelter could be provided this way. Some general supervision of the administration would doubtless have to be provided to make the plan work. But this would be a small fraction of the amount that is spent on very inadequate relief.

This suggestion has worked fairly successfully in certain communities in the United States. One rather large community in the Southwest had several thousand people unemployed. This community organized the unemployed so that they worked for themselves, providing practically all of the necessities. Vegetables were grown. A cannery was built in which fruits and vegetables were put up. Cotton cloth was made, and this was used by the unemployed to provide garments for themselves.

Of course there are many minor items of a highly civilized community that cannot be handled in this way. Great care would have to be exercised to see that nothing made by the unemployed entered the regular channels of trade, for this would arouse the antagonism of the commercial and industrial interests of the community. But when all ob-

jections are considered, this remains one of the most feasible means that has yet been suggested for relieving unemployment on any large scale.

Using All the People to Do All the Work. If all the work that needs to be done in the world is divided among all the people that there are to do it, there can be no such thing as unemployment. If the total amount of work that needs to be done under any given set of conditions is such that everyone working four hours a day would just accomplish that work, unemployment would not exist if the working day were only four hours long. If half the people insisted upon working two four-hour shifts, there would be substantial unemployment.

Some economists will, of course, object to this argument. They will say that it is simply a wage-fund doctrine applied to labor. The objection, however, is not valid. No one would argue that the total amount of work that needs to be done is constant or that it is definitely limited. Indeed, it is undeniable that it is almost unlimited. We are simply stating that, if it takes a certain amount of labor to make all the goods and provide all the services that the people want or can use or can pay for under any particular set of circumstances, that amount of labor can be divided among all the people. When this is done there cannot be unemployment.

The suggestion might be made that if each industry had to look out for all of its own people, one would never get the industry to change. That problem could be handled by controlling the flow of people into occupations. Any country that calls itself civilized should have a complete occupational plan indicating what the occupational distribution

should be. In the United States we have approximately two million people who should enter occupations each year. By controlling this flow into occupations, we could easily make any adjustments that are necessary. Once the initial distribution is correct and a plan is drawn up to keep it so, it would be very simple to take the position that the work in any industry would have to be divided among all the people attached to that industry.

Many leading industrial concerns of America have been moving in this direction. The recommendations of one of the committees appointed by the President of the United States on the unemployment situation advocate essentially this plan. Practically all of the important factories in one city agreed during the period of serious unemployment to operate their plants only three days a week until they were employing their normal number of workmen. After taking on the normal number of men, if they were still not able to take care of their orders, then, of course, they would extend the number of days of work. It is obvious that if this scheme works and all occupations are included, the city will have practically no unemployment. Of course, there is no reason to think that an individual city could carry out this plan perfectly at the first attempt. In practice many industries have been willing to adopt the plan for the workers but rarely for the higher officials. Needless to say, the plan should apply to everyone.

When it became evident that there would be a decided falling off of the amount of work to be done in a certain manufacturing plant, this concern called together all of the employees, the situation was explained, and the men were asked whether they preferred dividing the total work

among all the people including the office force or whether it would be better to discharge gradually a substantial portion of the laboring force. Unanimously the men voted for dividing the work among all the people. The management of this concern took the position that if leisure were put up "in usable packages," as they expressed it, the men could enjoy it and be as satisfied in working four days a week as in working six.

As many of the men have said, the scheme has furnished the opportunity to spend long week ends in the woods, to do gardening, to work around the house, and to engage in many other activities for which they could never find the time before. It is quite true, of course, that the men may not be able to have as expensive automobiles as formerly and will have to get along with a cheaper radio. Perhaps a pair of shoes or a hat would have to be eliminated from the clothing budget. But after these adjustments have been made, they seem of rather trivial consequence. If the men know that four days' work is reasonably certain and that it is so adjusted that it will not interfere with their leisure, a way of handling unemployment in an emergency can be evolved.

Can There Be Work for All the People? There is no danger that under an economy of plenty, there would not be sufficient work to keep people healthily employed for a reasonable working day, working week, and working year. We could easily use many millions of additional workers to produce all of the goods and services the people of this country would like. Various estimates have been made of the additional number of people it would take to provide as much of certain materials and services as the people of

this country would like. The following estimates have been made for a few items:

Health	2,000,000 people
Travel	20,000,000 "
Planning	2,000,000 "
Education	5,000,000 "
Arts	2,000,000 "

The estimate as to the additional people needed in health is based upon the health service provided for those of adequate means at the present time plus adequate public-health and research work. The very large figure for travel is interesting in many ways. It was assumed that the average person would like to travel about as much as the average person of independent means now travels. It is further assumed that the same standard of efficiency in providing travel would continue to exist. Actually, of course, there should be increases in efficiency. In making these assumptions we get a rough estimate that about 20,000,000 people would be needed to provide services for transportation. The estimate for planning is based upon the number of people it would take to make certain rather simple changes in the general living and working conditions of the country and to replan certain parts of our communities. The estimate for education is based upon a sharply reduced size of school classes and upon an extension of educational opportunity to practically all groups that would like it. The estimate in the arts is a combination of various estimates of the number of people it would take to provide certain artistic activities in the form of the drama, music, painting, writing, sculpture, dancing, and certain other fields. There are hundreds of other occupations that would at present require large

additional numbers of workers, while man's restless ingenuity will bring into being in the future wants that we cannot even guess at today.

Unemployment Insurance. A fundamental solution to the problem of unemployment must provide for some organization that will use all the people to do all the work that needs to be done. The difficulty here, as we have seen, is not in the lack of things that need to be done, but in lack of co-ordination which shows itself in lack of purchasing power and other maladjustments. To remedy these defects will probably take a very long time. As a device to be used in the meantime, many people have urged unemployment insurance. There is much to be said for it. Any society that has not ingenuity enough to abolish unemployment, should, as the simplest matter of justice, set up a comprehensive scheme of unemployment insurance.

Need for New Methods of Social Control. Theoretically, it should be easy to have the development of new machinery, a shortening of the working day, and the advance of technical science contribute greatly to human welfare and prosperity. Practically, it is very difficult. And the difficulty grows out of the fact that we do not have the social machinery to deal with the new problems. To bring our social machinery up to date does not mean that we need to overthrow all our old institutions, but it certainly does mean supplementing them with institutions capable of dealing with the new conditions. For instance, we drastically need a new constitutional convention called not to revise but to remake the Constitution of 1789. It did very well for the purpose for which it was made. But today we need a constitution conceived in the spirit of present problems and

dedicated to their solution. If the able group of men who wrote the first Constitution were to be assembled today, there is every reason to think that they would write a second one that would be as nearly adequate for our problems as was the one that they wrote for those of the time in which they lived.

Theoretically it should be possible to reduce the hours of labor by half for the entire world and have no falling in the the standard of living. This decrease in hours of employment without a decrease of the standard of living has been one of the prime driving forces of economic history. The urge to invent machinery to relieve human labor is theoretically sound. The refusal to set up definite institutions and to invent a social organization to take care of the changes introduced by the physical machinery is thoroughly stupid. When the introduction of physical machinery was taking place relatively slowly, we could trust to chance to make the adjustments gradually.

Either we should slow up on our rate of change in the physical sciences or else we should greatly accelerate our invention of control in the social sciences. As Professor William McDougall puts it so vividly in the little book, *World Chaos*, we either must accelerate the rate of development in the social sciences or else the physical sciences will bring disaster. Theoretically, of course, our fundamental problem could be solved by either means. We could slow up the rate of change in the physical sciences and this would give our customary and habitual means of social growth a chance to become more nearly adequate. This does not seem to be a practical alternative in the twentieth century. The prestige of the physical sciences and the advantages

of physical change are too great. Then the only practical alternative seems to be a tremendous acceleration in the rate of development of the social sciences and particularly with those which have to do with our instruments of social control.

What Can the Schools Do? The schools can play a very important part in solving the problem of unemployment. The schools in every community should have a comprehensive plan of the number of people needed in each occupation. The schools, as social institutions interested in all the people, are bound to construct this plan so that all the people will be used to do all the work. There will be great difficulties at first in making such a plan. The school people do not know how to do it largely because they have not realized the necessity for such planning. They have not considered it a part of their duty. However, over a period of years it should be possible to train the school people up to their responsibility.

At present many school systems have teachers of "guidance," so-called. What these have considered to be their task in the past has been largely to advise certain individuals how to get ahead more rapidly than other individuals. What is needed now is a comprehensive plan involving the use of all the human resources of the community and the best and fairest distribution of these resources. In each community the school teachers and the school pupils might well form the nucleus and actually construct such a plan. The first step would be to determine the number of people in the community working in each occupation and the number unemployed. This might well be a very important project of socially useful work for the schools. After this compre-

hensive picture of the work going on in the community is constructed, additional steps can be taken. Study should be made to determine the number of boys and girls leaving school each year who would need work. In the light of all the available facts regarding the occupations and regarding the individuals, estimates should be made of the number of these boys and girls who should enter each occupation. Allowance, of course, would have to be made for numbers entering and leaving the community and for many other factors. The very reason for making the plan is the fact that pupils and teachers working with the organized occupational groups in the community could make these decisions much better than could the individual unaided.

In spite of the fact that these groups could make a better decision than the individual, the individual should be left free to enter any occupation he may choose. The plan, if it is fairly drawn up, will carry such weight that approximately the correct number of people will enter the different occupations. If in any case too few people are entering an occupation, greater inducements should be given in the way of training, improved conditions of labor, and the like.

The schools have a most important duty in helping to solve the problem of unemployment. If they discharge their obligation properly, each community, each state, and the entire nation will have a comprehensive occupational plan to use all the people to do all the work.

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CHAPTER XIV

WHAT WE CONSUME

We Are All Consumers. Everyone is a consumer of hats, or shoes, or wheat, or other commodities. It may be possible under our particular social and economic organization for many people to evade their obligations as producers. Even though many people do not produce, everyone does consume either what he has produced or what someone else has produced. To balance consumption satisfactorily against production or production against consumption is one of the great economic problems of the present day. As we have stated earlier, there was a time when an increase in ability to produce was the chief economic need. That time is past. The most important and most difficult thing to accomplish in the present stage of development of the economic world is to improve the balance between productive capacity and consumption.

With this in mind it is difficult to understand the present neglect of the field of consumption by the economist. In earlier days when increased production was the important thing necessary to improve economic welfare, the neglect of consumption could be understood. It is quite inconceivable that an adequate statement of economic theory today could confine consumption to the minor rôle that it occupied in the past. It was customary through the eighteenth and nineteenth centuries for many an economist to say that consumption had no part in economic theory. Many of the older

economists maintain the same position even today. Looking toward the future, however, it seems impossible to build adequate social machinery to insure balanced production and consumption without a more adequate consideration of consumption.

TABLE XV—WHAT WE CONSUMED IN 1929

Estimates in Dollar Value of Items Consumed [1]

Items	Dollar Value in Billions	Per Cent of Total
Food	20	27
Housing, including furnishing, equipment, fuel, and light	18	24
Clothing	12	16
Pleasure travel, including expenditures for automobile travel	7	9
Other leisure activities, including motion pictures and sports	4	5
Health, including cure and prevention of sickness	3	4
Smoking; drinking (other than that accompanying food)	3	4
Miscellaneous, including a great variety of goods and services	8	11
Totals	75	100

What We Did Consume. Table XV shows what was consumed during the year 1929. Food was the most important item, accounting for approximately 20 out of 75 billion dollars. This was about 27 per cent of all expenditures for consumption items. Housing, including house furnishings, equipment, fuel, and light, accounted for total expenditures of 18 billion dollars. This was almost one quarter of the total consumption in the country. Clothing cost almost 12 billion dollars or about 16 per cent of the total consumption. Food,

[1] In addition about $15,000,000,000 were spent in buying new capital equipment, factories, buildings, etc. This is usually called savings.

clothing, and shelter took about two thirds of all the money spent on consumption.

The automobile has become one of the leading items of expenditure. Transportation for purposes of pleasure accounts for an expenditure of probably not less than 7 billion dollars. This is almost a tenth of all the total consumption in the country. Other leisure activities including expenditures for the cinema and for sports account for approximately 4 billion dollars. Expenditures for health account for another 3 billion dollars. Smoking and drinking probably consume an additional 3 billion. A long list of miscellaneous items of goods and services accounts for the remaining 8 billion dollars. The total income of the country in 1929 was approximately 90 billion dollars. About 15 billion dollars are left in addition to the 75 which were spent for consumption items. Ordinarily we would say these 15 billion were saved. Actually they were spent the same as any other money. However, they were spent for new capital equipment in building new factories, in buying new machinery, or in any of the other ways in which we spend money when we say that we have saved it.

What Things to Consume First. Very little is known about what actually determines the order and rate of consumption. The whims and fads of fashion are quite uncontrolled at the present time. There is no thought here that consumption of goods should be highly standardized once and for all. Study must be devoted to finding out what causes changes, whether they can be anticipated, and whether anything can be done to meet anticipated changes. Steps must be taken to see that such changes are carried at full cost in terms of displaced men, idle machinery, and

possible unemployment. Rapid changes in fashion may well cause unemployment. If thousands of people are making corsets and fashions suddenly change so that corsets are no longer made, these people may be left without work. In the past we have assumed that the individual workman must bear all of the cost. If his job disappears through no fault of his own, he suffers the consequences. It might not be unreasonable to charge a higher price for fashion goods so that very large reserves might be set aside in order to pay the workers until they find other jobs. One solution might be to have industrial establishments far larger than our present ones. These larger establishments would simply shift people from one process to another as the tides of production and consumption shift, or perhaps they would even become a force in directing a change in consumption. It would indeed be odd if adjustments were totally beyond the power of human influence.

There is a long series of factors, many of great power and influence, which prevent consumption from taking the most desirable channels at the present time. High among such influences must be placed certain types of advertising. It may well be admitted that some advertising is not only highly beneficial but that it is absolutely necessary to intelligent consumption. It would be very difficult to deny, on the other hand, that a large part of the advertising today is directed solely toward increasing the profits of particular concerns regardless of the effect upon other concerns and upon society as a whole, or even regardless of the desirability of the article consumed. In short, much advertising is economically and socially wasteful. Again there is no thought that a censorship should be established to control articles of

consumption. Such a scheme would be unthinkable and totally at variance with everything advocated in this discussion. However, it does seem that it should be within human ingenuity to bring advertising under much better social control. When control is mentioned, many people instinctively think of government. Perhaps this is the worst type of control which could be used at this time. If instruments of control were entirely confined to political government, the prospect indeed would seem almost hopeless. Fortunately, such is not the case.

How to Plan Consumption. There are many schemes of control that are not dependent upon political government. Our professional associations and our trade associations constitute one type of control. There is no reason to think that control bodies with real power might not represent advertising mediums, advertising agencies, the advertiser, and the public. It may be objected that such bodies would have no legal power to compel action. Legal power to compel action is perhaps not the most necessary thing needed to further adequate processes of social control in many fields. Bodies that have access to expert information and use the information to direct actions, and that at the same time are subject to certain pressure to make recommendations for the good of the social group, are perhaps just as effective in the long run in certain fields. At least, because of the fact that governmental control is doubtless completely out of the question in many fields, other types of control must be investigated.

One fundamental defect in regard to more satisfactory consumption is the fact that the public has few adequate sources of information to which it can go to check the ac-

curacy of the statements of advertising. Very inadequate standards have been developed in the field of consumption. One of the first things that should be done is to develop on a large scale testing laboratories in which disinterested information can be obtained regarding various consumption products. The time might even come when the public would demand the source of the claims that are being made for the particular product. It might even be possible to visualize the day when it would be a waste of time to present unsupported claims to the public.

Can Advertising Be Controlled? Many forms of advertising without doubt shift consumption from one product to another without the slightest gain to society. From the social standpoint it is of no great significance whether gasoline is bought from company A or company B. To spend millions of dollars to persuade the people to use one brand of cigarettes rather than another does not seem the most valuable use of energy. We will not say that there may not be some slight relation between the efficiency of the advertising and the efficiency of the product, but certainly the relationship is not close.

The incidental effects of much of this advertising are definitely harmful not only to the consumption of the product concerned but to the consumption of many other goods. When advertising signs obstruct many of the most beautiful natural views along our highways, they are destroying one very important object of consumption in the attempt to increase another. Perhaps the great majority of the American public is fully convinced of the desirability of stopping this form of advertising.

The attempt to shift consumption from one product to

another without gain to the social group not only absorbs large sums of money, but, what is perhaps more important, takes much of the ablest talent of the country. Whatever one's opinion of advertising may be, there can be little doubt that as an occupation it has succeeded in attracting a large number of highly competent people. Much advertising is undoubtedly informative and educational. But the price paid for this is excessive from any social standpoint.

In normal industrial times in America we have what is known as a buyer's market. This is particularly true in times of depression. The person who is buying might well control the market. This condition means that the able salesman is at a great premium because American industry with its high productive capacity no longer finds production the major problem. From the standpoint of industry, as now organized, to dispose of this product is the major task. Because high profits come to those manufacturers who are successful in disposing of products and because of the consequent pressure upon sales agents to make sales, the consumer is in a very unenviable position. Almost any statement will be made to the consumer as long as it is not possible to check it; in the present state of our ignorance it is possible to check very few statements.

The Ignorance of the Consumer. Who but an expert in foods could possibly check the rival claims that are made for many prepared foods at the present time? We are told that this or that vitamin is necessary for physical health and welfare. The ordinary individual has only the haziest notion of the meaning of all this discussion. Equally, many a consumer is lost when he reads the conflicting claims made for different automobiles. He may look at the colors or the de-

sign and decide which one to buy. But he has little basis upon which to judge the efficiency or economy of operation or the claims regarding many technical matters. When it comes to such things as furniture or clothing, it is almost impossible to check any statement and the range of price for articles that look the same is almost beyond belief. In one store a pair of shoes can be bought for $5 that seem to be identical with shoes costing $10 or $15 in another store. One store will sell a suit of clothes for $25, another for $50, another for $100, and each claim that the material is the best that can be bought. The price to be paid for women's hats seems more like the returns from a lottery prize than a rational scheme of consumption. One hat would be $2, the next one $20, and the next one $200. Each claims to be the latest model and the best material. One can run on through practically the entire range of consumption goods in the modern world and find the same conditions.

It is not possible for the ordinary individual to have technical knowledge in all fields. Extravagant claims made by the seller, a totally irrational range of prices that seems to have been determined almost entirely by the presumed gullibility of the public—such is the situation! There may have been a time when competition would force all prices to a fair and reasonable level and only to that level. Certainly that time has passed in the United States today. If the large producer and the honest producer want and need a defense against a dishonest producer and seller, just so must the public have a defense against rival producers and sellers. Only thus will it be possible to bring some semblance of order and reason into the consumption of commodities and services.

The Place of the Consumer. The place of the consumer in American society has been neglected. We have proceeded on the naïve assumption that every individual is fairly competent to judge every product that he needs to purchase. This assumption had some validity in a simpler society where most of the products were produced locally and most of the people were reasonably well acquainted with almost every article produced as well as with the person or persons who produced it. But certainly no one person today could be even moderately well informed regarding the qualities of the thousands upon thousands of articles offered to the modern consumer.

The producers of many commodities are gradually becoming organized. This in the long run should be a good thing and should bring about more stable and orderly marketing, but to balance this we must have the organization of consumers to bring about more orderly and intelligent consumption.

It is not only what to consume that causes difficulty, but the question of when to consume—when to buy and when to save. This is also one of the important issues confronting society. Just as no individual in the complicated modern world can possibly be intelligent regarding the buying of all possible items, so no individual can have the information to make intelligent decisions regarding saving or regarding when to consume more or less. Whether we like it or not, the very fact that the order and rate of our consumption profoundly affect the welfare of other people requires that such consumption must be considered in terms of social welfare.

In a better co-ordinated economic order a large part of the present pressure to force people to buy would be removed.

If our industrial units were very much larger, much of the competition would disappear. Laboratories and testing bureaus rather than the damaging sort of competition which exists at present would provide the incentive toward better products.

No Money with Which to Buy. Perhaps a more important factor than a lack of knowledge in determining consumption is the lack of ability to purchase what is desirable. This is particularly true in the field of housing, in certain types of health service, and in many cases even in certain types of clothing. In the United States it is perhaps less true in regard to food than in regard to some other items. Even in this country there are many people who are not able to obtain food products which, from the standpoint of health, would be superior to what they are using. On the other hand, it would be readily admitted that a large part of the income at the lower levels is spent in buying things that are not most desirable. This is merely another indication of the need for further knowledge, knowledge which is not only available in some laboratory but which has become a common part of the everyday life of the working population. This is a task for the school.

With the average income of all wage earners only slightly over $1200 (in a prosperous year) it is difficult to conceive how an adequate standard of living can be provided for many people. An average of only $1200 means, of course, that millions of people live on far less. In many rural communities such an amount would provide a very satisfactory standard of living from the standpoint of health and even of comfort. As to its adequacy to satisfy intellectual, emotional, and artistic interests, a serious question might be raised. Even

to run the danger of making unsupported, dogmatic statements, it might be said that in ordinary cases it is impossible to provide adequately for all kinds of things on such a sum. In the great cities, one might obtain the cultural stimulation at a minimum cost; it is possible to enjoy good music at small cost, to borrow the books one desires from free libraries, to see even the best of pictures without cost, and for relatively small sums to attend the theater.

In the past the same conditions that have made it possible to obtain these cultural advantages for people in the city have made it quite impossible for people at the lower-income level to have adequate sunlight, air, or reasonable living quarters. It may be said, once and for all, that no amount of knowledge in regard to the use of an income as low as the average in the United States will provide a satisfactory basis of living for an average family. From one standpoint, of course, this is simply an additional argument for the highest possible degree of information and intelligence in using the limited income that is available. Certainly it is not an argument to assume that knowledge regarding consumption cannot relieve the situation.

As was pointed out in Chapter I, however, such a low average level of income is quite unnecessary. If the people of the United States are willing to institute reasonable types of social control in terms of the present economic order, there is no reason why the average level of income cannot be raised until low income will no longer constitute a barrier to a satisfactory life. Even if that day comes, adequate institutions should be available to provide expert knowledge in the field of consumption. As the world becomes more and more complex, there is no reason to think that an unguided individual

can find what is for his own good. Many people assume that the alternative is to force the individual to do something that someone else thinks is for his good. Of these two alternatives we would admit that it is far worse to be forced to do the desirable than to do the undesirable from choice. There is another course available; that is, to provide adequate information so that people will have the basis for making the proper choice. In the field of consumption there is no reason to think that the results will not be satisfactory.

More Things and the Good Life. There is one fundamental criticism of the whole discussion of consumption which would be raised by some very thoughtful people. This is the basic assumption that one must consume more things in order to live a satisfactory life. We would be the first to admit that after one passes a certain level, additional material things probably play little or no part in the fullness of the life one lives. Most of those who criticize the philosophy of material things, however, are people living on a scale far above the point at which material things are vital. It is very simple for a man living on $5000, $10,000, or $25,000 a year casually to say that material things do not add to the fullness of life. It is quite another thing for a family to live on $1200 in a metropolitan district and say the same thing. No one would deny that material well-being bought at too high a price is a poor bargain. On the other hand, for perhaps a large majority of the families in the United States, a substantial advance in the level of physical well-being would add enormously to the possibility of satisfactory living.

Summary. Many economists have neglected consumption. In the days when it was impossible to produce a reasonable amount for everyone, production was properly em-

phasized. Adam Smith went so far as to say that only the production of physical commodities was real production. Services were not production. Things have changed greatly since that day. More and more people are producing services. This movement will doubtless continue. As production becomes more efficient, consumption will play a larger part in economic thought. As a greater and greater margin develops, it becomes possible to provide any one of a great variety of commodities and services. What commodities should be consumed? This question will become more and more important in economic discussions of the future. It is here that education may play a most important rôle. The teacher and the schools should have an important part in making consumers more intelligent. This in turn will make the schools one of the most important factors in economic life.

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CHAPTER XV

OTHER ECONOMIC ORDERS

Economic Orders Change. Many people seem to believe that the particular economic order in which they live is the only kind which ever has existed or ever will exist. There is no justification for this opinion. Economic history records one change after another regarding methods of organization and general schemes of economic activity. Many people seem to be intellectually incapable of even considering alternative economic orders. It is quite true that sudden and drastic changes generally prove to be disadvantageous. However, there is certainly no reason why changes should not be considered and why the good and bad points of possible alternative methods of economic organization should not be known. It should not be beyond human capacity to take the good elements of other systems and adapt them to our own.

Possibly no one is able to be strictly fair in comparing different economic orders. Undoubtedly the safe thing to do is to warn the reader of the particular bias or prejudice of the author and then allow the reader to weigh the evidence in the light of that prejudice. The point of view, the background, or the prejudice, if you like, from which this chapter is written is that of private competitive capitalism—not necessarily a capitalism that is uncontrolled as it is today, but a capitalism that has developed to a degree of social control and planning that do not exist at the present time. No attempt is made to justify private capitalism. It is

simply accepted as the economic order under which we are likely to be living at least for another generation or two. So far as the author can see, the changes to a socially controlled capitalism could be brought about while the general outlines of the present economic order are preserved.

One Definition of Private Capitalism. In stating that the general outlines of our economic order are those of private competitive capitalism it is not meant to imply that all phases of our economic order equally represent this viewpoint. There are already many phases of economic activity in this country that are under group or social ownership much as the socialist would advocate, and there are probably certain types of activities that are under communistic control and organization. Although no logical line of demarcation may be possible in differentiating one economic order from another, the general outlines of a system are likely to reflect one viewpoint predominantly.

We shall use a rather narrow definition of private capitalism as implying private ownership of the major part of our economic resources. Our argument in other chapters has shown the necessity of a social control and a social planning of many phases of economic activity. There is no theoretical reason why private ownership and a substantial degree of social control may not exist at the same time. We are not advocating either the continuation or the abolition of private ownership. We are simply stating that as far as we can see there is no reason why forms of social control cannot be evolved without destroying private ownership. From the standpoint of expediency, a very good case could be made for this procedure. Doubtless most people in the United States would be willing to consider various schemes of social

control if they could be shown that our industrial machine could produce an enormously greater amount and that private profits would not necessarily suffer.

Essentially then we should define private capitalism as an economic order in which the ownership of property rests largely with individuals. In the highly specialized world of today some planning and some form of co-ordination are necessary. This planning and co-ordination seem to make more or less inevitable certain restrictions upon the use of property privately owned.

Socialism and Communism. As contrasted with this system of private capitalism, other schemes of organization have been advocated and are being advocated. Socialism, for example, is a form of organization that is interested in having the major productive processes under some form of group ownership. Communism may be defined as an economic order that has not only production under group ownership but also the distribution of the product of production under group control.

Omitting the many varieties of each of these major economic orders and the almost innumerable other systems of economic organization that might be advocated, we may define private capitalism as private ownership of most of the property; socialism as group ownership of most of the instruments of production; and communism as group ownership of most of the instruments of production and most of the products of production.[1] As to which of these systems is the best probably no one in the world is capable of giving an objective answer.

[1] The use of these terms varies in different parts of the world and among different writers.

The Claims of the Socialists. The defenders of socialism would point out the great possible benefits of industry organized for purposes other than that of private profit. They would particularly emphasize the human costs of many parts of the profit system; they would say that in too many cases profits have been made at the expense of human welfare. They would argue that this was true in the early factory system in England; they would point out that the conditions in the early textile mills almost passed human belief. They would be inclined to say that conditions in many parts of the world are little better today. A visit to the coal fields of England or of Pennsylvania or to the iron and steel works of Germany would go far to bear out this contention. They would point to the unemployment and insecurity throughout the entire capitalistic world; to the wastefulness of competitive concerns in the distribution of gasoline with four gas stations on four corners where one would answer just as well; to the multiplication of retail stores, of surplus outlets, of surplus manufacturing capacity; to the antisocial uses of large aggregations of capital simply because profit could be obtained therefrom. They would raise the question regarding manufacturing plants that cater to the extreme luxury trades while people are going hungry and are without adequate housing.

The indictment could run on for pages and pages, and in turn they would say that a social organization of production would remedy these defects. Their argument is that production should be for use and not for profit. If from early childhood one heard nothing but this doctrine, it would be difficult for one to see the logic of any other scheme of organization.

The Claims of the Communists. The communist, however, would be just as bitter in his denunciation of the socialist as of the private capitalist. From his point of view you cannot get a rational organization of economic life simply through the collective ownership of the more important agencies of production. You would still have left the great question of how this production is to be distributed. The communist would say that society as a whole must not only control the means of production but also distribute the product of that production according to the needs of all the people. He would say that the only scheme of organization that would approximate this is the ideal of the family where each one works at his own task to his highest ability and the total product is divided in the way that all think best. The communist would say that unless you are prepared to go the entire distance, you will sooner or later be forced back into the troubles of private ownership. Unless you take over the matter of dividing the product, it will not be long until you will be forced back into exploitation from the standpoint of production for profits.

For those who have been brought up in another tradition it is exceedingly difficult to visualize how this scheme of division would work. Certainly in many ways it is a noble ideal to demand from each according to his ability and to give to each according to his need. Needless to say, such a scheme is not being tried upon any large scale anywhere in the world. In the minds of many people the Soviet Union is a communistic country. But those who have been there have great difficulty in finding any extensive evidences of communism. At different times in the past there have been small villages and districts that did operate upon communis-

tic principles. The great bulk of the industrial workers were paid differential wages adjusted somewhat according to their ability and efficiency. In a large proportion of cases even piece work has been adopted as the method of payment. This, of course, is a long, long distance from communism. In fact, the Soviet Union might far more accurately be defined today as a land of state capitalism. It is quite true that most of the means of production are owned by the group; according to our definition this might legitimately be called socialism. Perhaps at some day in the future the Soviets will evolve a scheme of social organization so efficient that they can realize the ideals of communism. But the whole tendency during the past few years has been toward substantial wage differences and payments for special abilities in particular work. This, of course, is moving directly away from communism. The leaders would say that present arrangements are only a transitional stage and that the country is heading toward true communism.

Many of the great religious leaders of all time have advocated a scheme of economic organization that to many people closely approximates communism. Many competent authorities hold that Christianity, if taken literally, on the economic side would resemble a communistic scheme of organization. Whether this is true or not is beyond our competence to say; but it is interesting to contemplate that many of the most unselfish minds of the ages have advocated a scheme that seems to approach communism. Whether the world will ever be able to reach this stage of unselfishness remains to be seen.

The Actual Nature of Our Economic Order. When one has stated the theoretical differences between various types of economic orders, one has scarcely begun to state the

actual differences. America is presumably operated under a system of private capitalism; but as recent studies have so clearly shown, this private ownership of property has been profoundly modified by the modern corporation. The assumption of private capitalism in the eighteenth and nineteenth centuries was that each individual would manage his own property to the greatest advantage to himself and that this would bring the greatest benefit to all. But now in the modern world of large-scale production we find that almost half of the industrial wealth of America is in the hands of the great corporations. Practically all of these corporations are actually owned by a large number of people (stockholders). The people who own the enterprises do not control them. In this case, obviously the owners cannot live up to the fundamental assumption of the old private capitalism.

One of the objections to any change in our economic order has been that you cannot get efficiency if you have to look after property that does not belong to you. But actually half of the industrial wealth of America is in such a form that people other than the owners are in actual control and operation of it. This form of property has been growing with great rapidity. And there is every reason to think that within another generation far more than half of the industrial property will be in the hands of a few great corporations. These corporations are almost certain to be managed by paid employees who own an insignificant amount of the total property. Even today in some of our great industrial corporations all the directors and technical staff together own less than 5 per cent of the total stock. In others, all directors and all employees own less than 10 per cent of the stock. This, of course, fundamentally changes the argument regard-

ing the relative efficiency of different types of economic orders. If you are to have separation of ownership and control (and seemingly we shall inevitably drift that way), the question arises: What is the best form in which to have this ownership? We have assumed in the past that it is better to leave it in individual hands.

In the future this question is likely to be discussed on grounds somewhat different from those of the past. We are likely to begin to ask the question: What kind of ownership will enable the actual operators to discharge their functions most efficiently? This is almost certain to involve the question of what kind of ownership will further the co-ordination and planning of one industry with another. If this can be done adequately under private ownership, then there is no reason to think that private ownership would necessarily have to give way to something else. But unless private ownership is willing to allow those in control to plan and co-ordinate each industry with every other industry, then private ownership may have to give way to some other form.

There are good reasons for thinking that all of the past discussion regarding who is to own the property is much beside the point. The crucial question is who is to control it. Today in America ownership is divorced from control in a large proportion of cases. If that control can be made sensitive to social welfare and can operate the economic order efficiently, there is not much reason on purely economic grounds why we should be disturbed about who owns the property.

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Almost any textbook in economics used in this country will state the position of private capitalism more or less adequately.

CHAPTER XVI

ECONOMICS AND AESTHETICS

Using All the People to Make a Beautiful World. At first thought the relation between economics and aesthetic development might not seem to be very close. However, when carefully considered, the relation appears very real. We are living in a time when many people seem to fear that there is not enough work to be done. Certainly consideration of the ugliness of our man-made world would soon convince one of improvements that need to be made. There is little doubt that just adding to the aesthetic attractiveness of our buildings, streets, highways, etc., would use all of the man power that is likely to be available for many years to come.

However, there is a far more fundamental relation between the possibility of building a beautiful world and the economic system. Through most of historic time, as we have pointed out, practically all the efforts of the great mass of population have been required to provide the mere necessities for physical existence. That is no longer necessary. For the first time in human history it is mechanically possible for a small part of the population to provide our basic requirements, leaving a large part of the total productive energy available for creating a beautiful world. This is one of the most amazing and challenging possibilities of our new economic order. A really beautiful environment can be built for the entire population.

Aesthetic Development Built upon Exploited Masses. The periods of great artistic achievement in the past have been periods when the mass of the people were being exploited to provide the material base of wealth to make possible the creation of beauty for a small number. Although there may be some dispute as to the proportion of slaves in relation to free citizens in Athens, there is no doubt that for a large proportion of the population life was anything but a thing of beauty. It is true that the concept of a beautiful city had taken hold of the imagination of a large number of the free citizens of the city; and this produced amazing results.

Florence, during the Renaissance, presented much the same picture. A few wealthy and fortunate families took from a large proportion of the population the greater part of everything produced above a minimum for existence. This surplus taken from the masses was used, part of it wisely, in building great artistic monuments. The palaces that were constructed rank high as architectural masterpieces. Statues were carved that in quality have not been surpassed and perhaps not even approached in any later period. In the minds of many critics the paintings of Leonardo, Rafael, and others reached a height that has never been surpassed. The same might be said of the murals and bronzes.

Looking at the artistic development of Italy during the fifteenth and sixteenth centuries, one would think that the entire population must have been constructing these monuments of beauty. A little study of the agricultural history and the condition of the workers in any field, however, would soon dispel this illusion. One cannot deny that during the Renaissance in Italy unrivaled works of art were

produced in Venice, Florence, Rome, and even in some of the little hill towns. But in every case the price of the work was the food of some child, the clothing of some man, or the shelter of some woman. The possibilities of producing food, clothing, and shelter were so limited that the situation could not have been otherwise. Beauty was bought and paid for at a fearful price of human suffering and privation. If the energy had not gone into the arts, perhaps it would have been put into other private pleasures of the ruling classes. However, regardless of what the energy had been spent on, it would have been impossible to produce enough commodities for the entire population, and at the same time to leave a margin for great artistic achievement.

Why Work and Beauty Were Separated. This unavoidable condition of not having enough resources both to provide the necessities for all and to support art adequately brought about a very unfortunate relation between work and the arts. Beauty became something dissociated from work or any activity in life. There was not enough energy available to make the working conditions attractive for the ordinary laborer in Florence and leave a margin for his rulers. The result was that the ruler took the margin and left the workman in his hovel. The result has been, with very rare exceptions, that work has come to be associated with lack of beauty, perhaps even with ugliness and filth, certainly with unpleasant surroundings. Is it any wonder that in the minds of many people the most desirable thing of which they can conceive is to be relieved of having to work?

Beauty in Everyday Life. The amazing thing is that we ourselves have the opportunity to build a world of beauty

without demanding such human sacrifice. We could build an entire world of beauty, beauty not only in palaces and gardens, in pictures, statues, and cathedrals, but in workingmen's homes, in streets, in factories, and in farms. For the first time in history we can build a world in which all things may be beautiful. The nearest we can ever come to repaying the generations of the past for their suffering is to live up to the opportunity of the world at present.

Beauty in Places of Work. Perhaps the most difficult part of this ideal to realize is that which pertains to the world of work. As we saw, many people assume that a place to work must necessarily be ugly. They say that it is impossible to build steel mills or oil refineries that will not disfigure the landscape. We are inclined to take a different position and to say that until this has been done, one of the major opportunities for aesthetic development will not have been touched. For a long time in the future, man's work will be the center of his social usefulness. If art is not to be something detached, it must be intimately connected with the work that is being done. We have made a small beginning. Those in charge of an occasional factory here and there have tried to improve its surroundings and even to design its buildings so that they would be pleasing to the eye. In some of our great office buildings the attempt has been made to add to their attractiveness by beautiful design both inside and out. Many of our public buildings are architecturally pleasing. But when the workers in all these buildings are totaled they are only a small fraction of the millions gainfully employed. Too often there is confusion in the public mind between an expensive building and one that is beautiful.

Many an industrialist would say that attention to the beauty of industrial buildings and surroundings is futile because it would raise the cost of commodities produced therein beyond a competitive level. There are two answers to such an objection. In the first place there is no essential reason why for many types of construction a beautiful design should cost more than an ugly one. Much could be done to improve artistic effects without an appreciable increase of expenditure. It might require a far larger amount of social planning in the location and general construction of industrial enterprises. The second and more fundamental answer is that society now has the margin of energy and income which, properly organized, could be used to make our places of work attractive.

What Kind of Art Curriculum? What does the preceding discussion mean for the art curriculum of the ordinary school? It is perhaps not too much to say that the ordinary fine-arts instruction in the schools has had no important effect upon communities. This is not surprising, because it has not been designed for that purpose. Even where there is a fairly extensive program in the fine arts, it usually consists of a little drawing or painting and perhaps some modeling. History of art is primarily a discussion of painting, sculpture, and architecture in Europe during the past few hundred years.

All this is desirable and important material. However, it is really only fragments of the curriculum of the professional artist. It is likely to have little or no meaning to most of the students, and certainly could not be expected to make any significant difference in many of the pupils or in their communities.

It would be far more useful if the student were studying the artistic problems of his own community and his own life. He would study as much of the history of art as would throw light upon his present problems, and the study would be from this point of view. This does not deny the importance of creative expression on the part of the individual learner. He would be encouraged in creative activity far more than at present. He would even be encouraged to find out far more of the history of art. But the first aim in every case would be that the social criterion be appreciated and understood. A prime obligation of the teacher and the school is to see that every child understands and feels to the limit of his capacity the possibilities and methods of building a beautiful world for all.

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CHAPTER XVII

INDUSTRY AND CULTURE

Is Man the Slave of the Machine? During the first three decades of the twentieth century we heard much of the undesirable effects of modern industry upon the cultural development of the worker. The iron slaves that drove mankind became a familiar figure of speech. Everyone seemed to feel that modern industry demanded from labor a type of work that needed to be done as quickly as possible and then forgotten—a mere fragment of a huge process of production. The popular writer longed for the days of the past when man had worked at labor that had some meaning.

This lament was not begun in the twentieth century. In fact, through a large part of the nineteenth century many writers and reformers looked back to the days of handicraft industry when the workman had pride in his job and could watch the finished product appear under his hand. It was usually a little difficult to discover the point of all this writing and complaining. Occasionally it was suggested that we should go back to the old days, but in no case was any practical plan offered by which we could go back. There seems to be no reason to think that it ever has been or will be a feasible thing to go back to a simpler stage of economic development. If the present system becomes so complicated that we cannot work it, we may see a breakdown and a return to an earlier and simpler kind of society. But barring

this possibility, there seems to be little prospect that man will be living in an environment much simpler than the present one.

Without question industry offered little of educational importance to the child standing before one of the textile machines of the early nineteenth century or to the workman of 1900 standing every day before a drill press punching holes in metal plates. The complaint in the period, 1850–1900, that much industry was deadening was undoubtedly justified. Much of the industrial work of the world is still of the same order. One might go as far as to classify the industry of the first third of the present century as routine work controlled and dictated by a machine.

A Repetitive Job. Some years ago the author worked for a few months in one of the great industrial establishments of America. From 11:30 at night until 6:30 the next morning the same task had to be repeated hundreds and hundreds of times. A product of rubber and fiber came from a giant machine; he stood before it winding up the product on great reels. Nothing to do hour after hour but turn these reels and see that the product was properly wound around them. The job could be mastered in fifteen minutes and after that it was night after night of utter boredom. The work was not difficult; it was simply meaningless. For the first few nights there was a certain excitement about it; after that the settling down into a dull, dead, sleepy routine could scarcely be called conscious existence. Under no circumstances could any excuse be given for spending one's life doing such work other than that it was a way to earn money. For a few months one could face the possibility of this repetition. For many individuals to face the prospect

of that as a life task would be almost the same as not being alive during working hours.

We do not intend to intimate that there are not many who would prefer such a job of repetition to one that makes a greater demand upon the individual. Although there undoubtedly are some persons who would be more comfortable doing such work, the fact remains that such jobs have no meaning to many people doing them and provide no growth or development. If modern industrialism condemned millions of people to such an existence, it might well be questioned whether it were worth the price.

Some Dreams of the Past. The people who are always talking of the past and of the ideal working conditions once existing have in mind a limited number of occupations that possessed educative value. The writers in Europe refer to the great days of the guilds when such a craftsman as a goldsmith, for example, not only made a beautiful design but constructed the product; when the cabinetmaker, the cobbler, and the tailor designed as well as produced their products. Something must be said in favor of this organization for the favored few, but a study of the numbers of people involved even in those days would probably show that a great majority of people were condemned to routine and uninteresting jobs and to poverty as well. It was an economic order in which most of the people were working at undesirable tasks and getting very little for doing it.

Since we in America largely lack a guild tradition, many people here turn their eyes to farming as it existed in earlier days, and picture it as the type of labor that had meaning and educative value. We have no desire to deny that such was the case to a limited degree, but for anyone who has

worked in a tobacco field for twelve hours a day or who has pitched hay from sunrise to late sunset, or who has milked a dozen cows night and morning, there is another side to the picture. Agriculture even in its better organized condition still demands an enormous amount of drudgery from practically all the workers involved.

It is undoubtedly true that the variety of tasks to be done on the farm provided a fundamental type of cultural development for the young. One was brought into contact with real situations. But again there is little use in talking of going back to such a situation for any large proportion of our population. At the present time when 10 per cent of the population could provide the basic raw materials for our food, clothing, and shelter, the situation is entirely different. We would not be willing to give up the great range of services and materials that can be provided by the other 90 per cent of the population.

Machinery of the Future. Fortunately there is an alternative to going back. Industry for the past hundred years has been developing with such great rapidity that engineers now say that any repetitive work can be done by machinery. Engineers wonder why men have been standing in front of machines and going through the same movements hour after hour. They maintain that automatic devices can be made that will do the task as well and in most cases even better. The way out, then, is not back to the guilds and to handicraft industry or even back to the older type of laborious farming. The way is forward to an industry that can be educative for all. Such an industry lies in more machinery and not less.

The nineteenth century might well be called the "age of

man with a machine to help him," because in many cases both were doing the actual physical labor. The first third of the twentieth century might be called the "age of the semi-automatic machine," when man was a mere attendant upon the machine, providing it with material and removing the product. The second third of the twentieth century may well be known as the "age of the wholly automatic machine," of the machine that runs without human operators. Slowly out of the past we have the developments of these completely automatic machines, the story of which has been sketched in an earlier chapter. This development provides one of the really great opportunities of human history. If man invents social machinery to master this automatic monster we shall have at last acquired liberty, not for the fortunate few, but for all.

A New Type of Work. Liberty to do nothing will probably not be a desire of man. As far as we can tell, man is an animal craving activity. There is every reason to think that the new industry will become a major creative and educative force. The heavy plodding work done by the slave of old will be transferred to the new automatic slave. Since man does not crave a life of inactivity, will this new industry become a release for man's activity and energy and at the same time one of the cultural forces of his environment? Upon the answer to this question may well rest the culture of a large fraction of our population.

There is almost no limit to the things that need to be done in the world. Even after the automatic machines have taken over the routine work of providing our food, clothing, and shelter, there will still be plenty for everyone to do. It would be a major catastrophe if this additional work, how-

ever, were organized solely or even largely only to bring about increased output. It should be organized in terms of its human values. It should be organized as activity that is inherently desirable and to which production is incidental.

Work after the Development of the Automatic Machine. Perhaps most of the work of the world that has to be done after the automatic machine has been developed to a high degree can be made inherently educative. This is so important that the best engineers should be put upon the task, not of changing industry to increase production, but of changing the process of production so that the job will be essentially a desirable human experience. The late Professor Simon Patten years ago dreamed of this amazing possibility when he said that in a world that is properly organized all work that has to be done could be done by people who want to do it. With a being as active as man there is nothing except lack of ingenuity that keeps any large number of people doing tasks that they would rather not do. Certainly no economic system could be considered adequate that did not create the kind of work that is satisfying to human desires for meaningful activity. The aim should be to bring this about for the entire population. It is probably feasible to do it today for from 80 to 90 per cent of the people. Up to the present time it is doubtful if we have made any serious attempt to plan economic activity in terms of human desirability and educative worth.

It will not be easy to replan American industry in terms of its human value. We know almost nothing of the possibility of doing this at the present time. And there is no reason to think that society will suddenly employ a large number of people to explore the possibilities. On the other

hand, if and when society does provide an adequate number of competent engineers to work at this task, there is every reason to believe that the problem can be solved.

Even from the narrow viewpoint of efficiency there is much to be said for revealing to the worker the meaning and importance of the work that he is doing. This means increasing its educative value. In one of the best studies that has been made on the restriction of output among unorganized workers, we find the following statement: "Every sane worker demands that his labor shall have significance. Let a man see important work growing under his hand; let him feel in his own heart that he is necessary and important; and you have a strong hold upon his loyalty and interest. Subdivide his work so that the thrill of accomplishment is denied, and so that he cannot see that his work plays a necessary part in the whole; deny him the direct and emotional claims which every man craves; the limitation of production becomes a natural expression of the sound instinct to eliminate a useless effort. Industry and management can well go much further in sharing the thrill of adventure with the workman. At present it is common to think of labor as part of the production equipment and to deny any share in the emotional satisfaction of planning the accomplishment." [1]

Professor John Dewey has clearly stated that if there is to be a culture that has any vitality in an industrialized society, it must grow out of and be a part of the industrial work that is done in that society. Professor L. P. Jacks has much the same thing in mind when he refers to the

[1] MATHEWSON, S. B.—*Restriction of Output among Unorganized Workers.* New York, Viking Press.

dangers of separating vocation from living. Temporarily you may get increased efficiency; as long as increased efficiency was the major interest of the economic world, there was no alternative. Efficiency had to be bought even at the price of human beings. Today we do not need the increased efficiency at such a cost.

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CHAPTER XVIII

WHAT CAN THE SCHOOLS DO?

Can the Schools Make a New Economic Order? The answer to this question is *no*. The schools cannot make a new social and economic order. The question has been discussed much by school people in recent years. However, the question should never have been raised in this form. It would be just as reasonable to ask whether the newspapers could make a new economic order, or whether the churches could make a new economic order, or whether the family could make a new economic order. No one social institution in the modern world can create a new economic order if the force of other institutions is against it. Whether one social institution can create a new economic order is not the important question. The vital question to be asked in any case is: Will whatever influence any given institution has be thrown upon the side of creating a better economic world?

Perhaps the influence of the schools is relatively small as compared with all other institutions. But the same must of necessity hold true for most other social institutions. If there are scores of different institutions in society, it is clearly impossible for any one of them to have preponderant influence. It is not necessary that we decide exactly how much influence the schools might have in creating a better economic world. Whatever that influence is, and we think it is large rather than small, it should be thrown on the side of a juster, a fairer, and a more equitable economic society. The

amount of influence to be exerted by the schools may be small. What little the schools can do for creating a better economic world they should do.

What Could an Individual Teacher Do? Many would insist that the individual teacher can do little or nothing. This position seems to depend upon a misconception of the nature of the job to be done. To expect any one teacher to remake the entire society is quite absurd. This does not mean that the teacher cannot do a great deal. There are many things upon which the American public have largely agreed. Practically everyone would like to see unemployment abolished, poverty reduced to a minimum, conditions of work improved, and the physical appearance of our factories and houses improved. The list could be extended almost indefinitely. This large amount of agreement as to the things desired produces a great opportunity for the teacher. The very fact that they are desired by practically everyone in the society makes it possible for the teacher to discuss them.

It is true that in regard to the methods of obtaining these desired ends there is great difference of opinion. Much good could doubtless be accomplished simply by pointing out various means that have been advocated by competent authorities in the various fields. The teacher can doubtless present a great variety of the more carefully thought-out solutions to these problems. In some cases the situation in which he is teaching may be such that he can say that he favors a particular solution. In other cases this may not be advisable. In any case children are going to school in order to become more intelligent on these and other issues. The school is expected to provide more intelligent citizens. It is expected to bring up a new generation more competent to

deal with these issues than the past generation has been. We can be reasonably sure that a well-qualified and judicious teacher will have little difficulty in discussing most of these issues and in dealing with them in a way that will lead to progressively better solutions.

What Could a Single School System Do? A school system could accomplish far more than an individual teacher. A single teacher would be limited to the small group that he teaches. An entire school system can go much further than this. It would be possible to introduce many socially important problems that the individual teacher could not discuss. The school curriculum could be made to include matters that were considered important. All the children in the school system could be brought in contact with highly social material and this contact could extend throughout school life.

The teaching of the social sciences would differ greatly from its present form. Less attention would be given to describing individual success and how to obtain it, and more attention would be given to methods of advancing social welfare. A different emphasis would be placed upon the physical and biological sciences. Even languages and the fine arts would contribute to social ends.

The school system could draw up a comprehensive occupational plan for the community. It could make a substantial part of its curriculum out of the problems of that community. In fortunate cases it would perhaps be able to co-operate with pupils after they left school in increasing the educative value of their work.

What Could All the Schools Do? All the schools working together upon the problem of economic welfare could do far more than any individual school system. All of the things

mentioned above could be done and many others. A far wider range of activity could be introduced into the schools. More comprehensive plans regarding the economic life of the communities could be drawn up. All of the schools working together could draw up comprehensive plans for remaking almost all phases of our social and economic life. All of the schools working together could draw up a comprehensive plan for the physical development and appearance of all communities. The single school system could draw up a comprehensive plan covering the streets, highways, traffic, housing, factories, water supply, playgrounds, and many other phases of activity. All of the schools working together could do this same thing for the entire country. Many problems that could scarcely be touched by the individual school system could be dealt with most adequately by all the schools. Particular pains should be taken to see that no pupil left the school without the very best understanding that could be given to him regarding what his community, state, and country could be like.

Obviously, the schools could not do any of these things against the opposition of all other forces of society. Reasonable co-operation can be expected from many of these other agencies on many points. We might expect the schools to play the crucial and deciding part in the following among many other matters: (1) building a beautiful world; (2) abolishing unemployment; (3) bringing reasonable equality of earned income; (4) building co-operative groups; (5) developing social machinery capable of operating the economic order. Some of these items will now be discussed in more detail.

Specific Things the Schools Could Do. It would be quite within the possibilities of the school system to contribute to

the remaking of the housing facilities of the entire country. One might say at first thought that the schools have nothing to do with housing. But if the schools would see to it that no pupil finished his education without a clear understanding of what good modern housing is and of the method of getting it, we could expect action fairly soon. It is not too much to claim that if the schools in 1900 had had available a carefully worked out program of housing which had been kept up to date, the housing situation in this country would be entirely different today.

Many commissions that have studied the matter in our larger cities have agreed that great changes could be made easily if only there were an effective public opinion demanding it. If people clearly see the advantages of doing so, there is no reason why many of the worst blocks in New York City, for instance, could not be changed relatively easily. One block, which is typical of hundreds of others, has been carefully studied. It was found that there was a small open space back of each house, but ugly fences and small buildings destroyed any possibility of using this space effectively. If a combined park had been built, there would have been almost an acre of play space available for the children and other people living in the block. There is no reason to think that a reform of this kind could not be brought about by adequate information given in the schools. This is a very simple reform, but there are many others like it—so many, in fact, that it does not seem unreasonable to expect that adequate information would force proper housing. In this same category are plans for developing entire blocks as units and utilizing the roofs of the houses as park space.

Of course, far more fundamental things would have to be

done really to provide adequate housing in our great cities. But without information making for public opinion and a common attitude on the part of the mass of the people, this is going to take a very long time. Many other phases of our cities could be changed if the schools would work at the task.

Housing in Rural Districts. Housing is a problem not only in our large cities. The planning of our smaller cities and villages is just as important. In many ways the greatest need for planning is in the rural districts. Careful calculation has demonstrated that it is impossible to build adequate roads, schools, and hospitals; to provide adequate medical and library service; and to furnish electric light and power, running water, gas, sewage-disposal systems, and the other basic necessities of modern civilized life to widely scattered farm houses. Some replanning of our scattered farms will have to take place before we can possibly have even the material arrangements for satisfactory living in the rural districts. It is perfectly safe to say that people cannot live scattered at random on 160-acre farms and have all of these necessities. What form the planning of our rural districts will take is an open question at this time, but a concentrated attack upon the problem in all rural schools will undoubtedly bring workable answers. No pupil should leave a rural school without having in mind the best possible plan for the physical reconstruction of his community. As a first step which the schools could take immediately, the location of the houses in relation to the services mentioned might well be considered.

Planning Food and Clothing. Several recent calculations have tended to show that the total quantity of food produced

in the United States has been quite adequate to provide satisfactory amounts of food for all of our people. There is some evidence to support the position that, with the exception of a very small part of our population, the people have available enough food for a satisfactory standard of living. The food, however, is poorly balanced. Many millions of children and adults are probably undernourished. This problem would seem to be far more one of education regarding what to eat than of the basic difficulty of not being able to get enough to eat. Certainly the productivity of this country is great enough to provide sufficient food in a balanced diet for every individual. The schools could probably do much to help solve this problem if they would make sure that every boy or girl is adequately informed regarding what is a satisfactory diet.

Socially Useful Work. During the past few years there has been much discussion among educators regarding the necessity and possibility of having school children do socially useful work. One group has been inclined to say that there is no possibility of the child's doing anything socially useful in the modern complex industrial world. Many of these persons look back regretfully to our earlier agricultural societies where there was so much for the child to do. He could bring in the water or get the wood for the stove or fireplace. He could take care of the cows, feed the chickens, or collect the eggs. There were many things to do and the child could find his place in the economy of family life. Much of this work had beneficial educational results. There are few possibilities of a similar sort for the child in our highly industrialized world.

In connection with the school, however, there is a great

range of educative activities that are socially useful. The difficulty is not so much in the fact that the work is not there to be done as in the fact that with few exceptions the school people in the United States have not looked for the work. Elsewhere this has not been the case. In many of the rural villages in Mexico, for example, the schools play a very definite part in remaking the village. In some of the Mexican villages the school curriculum consists largely of the problems to be faced by the community. As many Mexican villages do not have an adequate supply of water, the entire school will study the question of how to obtain water and continue to study it until a satisfactory water supply is obtained. If the quality of corn grown in the community is not high, the entire school may devote part of its time to the project of increasing the quality and output of corn. If the housing in the village is inadequate, the entire school may work upon the question of more nearly adequate housing. If the diet of the village is restricted too narrowly, the question of diet may become a major project of the entire school until the village is taught how to raise a larger number of vegetables and other things that will extend the range of diet. It is not too much to say that in some of these communities the schools have been the most important factor in remaking the village. In other situations the part played by the school perhaps has been less, but in a large number of cases the schools have taken a very real part in remaking the life of the village.

Not only in Mexico but in other parts of the world the schools are actually doing their part in improving the life of the people. The children in the schools are performing socially useful work. In the Soviet Union many of the schools

consider it a primary obligation to engage in socially useful activity. This activity takes many forms. Sometimes it involves merely teaching adult illiterates how to read and write. Sometimes it involves working with a co-operative farm or a factory. Part of the purpose of this is undoubtedly the educational effect upon the children. If the children work on farms, even for short periods during the harvest, they will have a much keener appreciation of many problems than could be obtained from almost any amount of study. The same is true of factory work. Even a very small amount of work may give a far better idea of some situations than can be gained from books. In many cases the resulting education is highly important in determining the activity. In other cases the socially useful result of the labor is the dominant idea.

In China, in Scandinavia, in a few places in the United States, and in other parts of the world there are the beginnings of this movement of introducing socially useful work in the schools.

In the highly industrialized urban community in this country there are undoubtedly difficulties in finding socially useful work for school children. On the other hand they have certain advantages and facilities that have never existed before. As has been stated above, there is no reason today why every school system should not perform the socially useful labor of drawing up a comprehensive plan for its community. This plan might necessitate the co-operation of many other bodies. It might call upon experts in city planning, upon many kinds of engineers, and upon the highway and sanitary authorities. It might call upon the leading artists and public-health workers. It might require the co-

operation of innumerable people and organizations. But the schools should see to it that a comprehensive plan is drawn up for each community in the United States.

Some may object that this is too difficult and that the school children will not be interested in it. If the proper beginnings are made and the effort starts with their present interests, the children will be highly enthusiastic about the project. There are very few cities in the United States where the children can even get to school without crossing streets which bear a heavy automobile traffic. This, of course, is a clear indication of faulty planning. There is no reason why a city should be designed so that it will be necessary for children to cross streets congested with traffic in order to get to school. This very simple beginning could lead to the whole question of planning traffic and streets and beautifying buildings. It could be easily expanded into a comprehensive plan. The children of different age levels can work upon different parts of the plan. In one way the plan would never be finished until the city became perfect. Each school generation would make its addition to the plan. If this were done, we might quickly see a regeneration in the physical appearance of American cities. This is only one of a very large number of illustrations that could be given of socially useful labor that could be carried on in almost any school system.

Part of the worth of socially useful labor is its educational value. Part is in the thing that is actually accomplished. Perhaps the most important consideration is to begin early in life and see to it that every boy and girl is given some responsibility to improve his community. Each boy and girl should be given the opportunity in such a way that he

will almost of necessity carry out his responsibility. This would doubtless be far better training for the actual work of planning community welfare than any amount of discussion.

The New Curriculum. What would be the nature of the curriculum in a satisfactory educational system? There was a time not so long in the past when education was largely confined to a small specialized group of people. These persons were usually planning to enter one of the professions or to be engaged in one of a very small additional list of occupations. The proportion of the total population involved was exceedingly small. Most of the world performed its work and received training on the job.

In recent decades all of this has changed. In this country practically the entire population goes through the elementary school and more than half of it is enrolled at some time in the secondary school. The academic and intellectual material that was adequate for a small percentage of the population is no longer adequate when most of the people are in the educational system. Whatever may have been the merits of the old education for the small select group, it is certainly not desirable education for the much larger groups now in school. Even for the small proportion of the people who are going to engage in intellectual work as the major part of their activity the old schooling was probably not particularly efficient. The old curriculum conceived of education as so many things to be learned. The new curriculum is much more concerned with things to be done. Some of these things to be done may involve learning of the abstract type. Through all the ages man has learned a great deal; perhaps most of the learning has been from life situations rather than from books.

In a community there is something to be done. The child should learn the process of doing it. The long-term task is to find those activities for all ages of people that will be of greatest educative value. A supreme goal of education should be the construction of a world that will be educative from its very nature. Education has passed from something to be learned out of books to a life process of continual cultural development. There may remain, of course, some specific things that will have to be taught out of books. Perhaps human ingenuity will not be able to evolve a life situation to develop them. But as John Dewey pointed out long ago, in a proper environment a child will learn to walk, and even to talk very acceptable English from the nature of the life situation. In fact, if he is put in the proper situation, he will learn to talk French, Russian, or Chinese. If it is desirable for one really to know a foreign language, perhaps the time will come when the ordinary student in the public schools will spend a period in the foreign country. Even then it might demand further study out of books, but the situation will be more real than that which now exists in schools.

If it is important for a person to know something about the geography and general characteristics of foreign countries, perhaps much of this will be acquired in the course of visits to the countries. Here again some study of books and records will facilitate this process of learning. If the child should know something of agriculture or of industry, perhaps he may be introduced to it directly—at least to certain limited aspects of it. The process of education has been much too formal and artificial in the schools of the past. The new curriculum will be far more concerned in

having education take place as naturally as possible from the general situation.

The Social-science Curriculum. What changes might be reasonably expected in the social-science curriculum? At the present time most of the material in the social-science field describes what has happened in the past in the hope that this would be a help in understanding the present and the future. This is largely true of history and to a certain degree of economics and civics. Geography is largely a description of things as they are. There are many competent people who would reverse this emphasis. They would start with the problems of today and make them the crucial and important part of all the work. The study of problems of housing in the present world is important. In this study if it is necessary to go back to housing in Greece or in Rome, all very well. The same would apply to other matters. In studying governmental problems in the present day, if light can be obtained from the study of the past, that is the time to study former periods.

Most of the instruction in economics in the past has been a description of economic theories. It would be much better to make the discussion of economics deal with problems that are important today and use past theory in any way possible to help in these solutions.

Changes are needed at many places in the school curriculum. Probably in no field should these changes be greater than in the social sciences. The results from the changes should be very great. A properly constructed social-science curriculum would go far toward giving the schools some power in effecting changes in society. If we are asked the question: What can the schools do? we should probably

answer: They can do much if they will change the social-science curriculum so that it will deal with the problems of the present world.

Schools for All Ages. Education at one time dealt with content to be learned in a school. It was natural to think of it as confined to a relatively few years in each person's life. Now education is conceived of as making the entire life of the individual contribute to his cultural development. This automatically extends the concept of education from a few years to the entire life of the individual. Will there be schools for all ages? Perhaps not if we mean by school the formal, artificial institution which has existed in the past. If by school we mean some systematic effort to make everything that is done contribute to the cultural development of the individual, then the answer is *Yes!* We have seen in an earlier chapter that we have the margin of economic energy to devote to the effort of making work an educative experience. The schools can change their plans and programs from the artificial conception of earlier years to one involving this growth of the entire population.

It is quite safe to assume that if the schools do not broaden their conception of the nature of education, some other institution will be set up for this purpose. Schools, as they have been known in the past, will become relatively minor agencies for distributing certain types of information, much of which could be distributed more efficiently by other means. On the other hand, if the schools accept the challenge and the possibility of the present economic world and broaden their task to include the effort to make the entire life of man the highest possible cultural experience, then schools will become of enormous importance in the society of

the future. The work of the school will be extended to include the entire lifetime of the individual. In the earlier years much of schooling should be devoted to getting the child into a situation where he will learn most easily and rapidly at the same time that he is living normally. In later years the element of work will become more and more important, but there will be no sharp break in this process.

As soon as feasible each child will be given a little socially useful work that is of high educative value. This amount will be extended until gradually the person will be spending most of his time at work and relatively little at school. But even at this period the people in charge of the schools will be continuously trying to improve the educational possibilities of all the work that is to be done. The schools will be working with all groups in the society, seeing to it that in so far as possible all of life contributes in the greatest possible degree to one's education. This may involve tremendous changes in industry and in much of the work to be done. It may involve great changes in leisure and many other activities. But if the education of the future is to have vitality, it will largely grow out of the natural activities of the people; in turn it will be an important factor in determining these activities.

Spending $250,000 on Education. If you were to have charge of the education in a community of 10,000 people, on what age groups would you spend most of the money? At the present time the city of 10,000 might spend $250,000 on its elementary and secondary schools. It is very questionable as to whether all of the money that a community has to spend on education should be spent on people under 18 years of age. Certainly the $250,000 is not too much to

spend on the education of young people in such a community. But if there is only $250,000 to spend, it would seem far wiser to take at least $25,000 of this and spend it in the effort to make that community a more educative place in which to live. Probably small amounts of money spent in the community at large might produce a far higher level of education and culture than similar money spent on people at earlier ages. If it is important to teach children to speak English correctly in school, may it not be important to try to see that only correct English is spoken in the community? Then perhaps far less money would need to be spent in teaching the children correct speech. If they heard nothing but correct usage, the problem would be far easier for the schools. There are many resources for education in any community where small sums of money might enormously increase the level of education in that community. Some use of the newspapers and some control of advertising, perhaps of radio, or of moving pictures might well contribute more than the same money spent in the lower schools could contribute. If it is important for the people of a community to know something of India or China or South America, motion pictures of these countries available to the entire community might well be a cheaper way of teaching than the present instruction in the elementary school. We are not implying that less money should be spent on the schools as now organized, but we are definitely stating that it is exceedingly important to try to spend the money that is available for education in the ways and in the places that will produce the largest educational return. No community in the United States has yet formulated a comprehensive educational program for all of its citizens. When this is done,

we shall be able to say with a great deal of assurance that the schools are doing much to improve our economic welfare.

Summary. Some persons say that the schools can do nothing to improve economic conditions. Still others say that the schools should not try to interfere in such matters. The purpose of this chapter has been to show that most people do expect schools to improve our economic conditions. Several specific things are mentioned that the schools might reasonably do which would make a very great difference in economic welfare. In order to be effective in producing economic improvement, many changes will have to be made in education. If schools are to be effective throughout the entire life of people, they will have to be in contact with people throughout this period. This means that a comprehensive program of education must be evolved touching all of the people and attempting to increase the economic welfare of all.

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CHAPTER XIX

CONTINUE YOUR STUDY

We have seen in the preceding chapters that the rise of the automatic machine has created a whole new set of economic problems which are now facing the world; we have examined more specifically a few of these problems. We have seen that the world has but recently passed from a condition of necessary scarcity to one of potential plenty. Essentially the change has been from a world where there had to be a shortage of goods and services for many people to a world where there can be abundance for all. This is, perhaps, the most momentous change in all history.

We have seen that at the present the potential abundance for all has not been realized. It was pointed out that the reason for this has been the inadequacy of the social organization in dealing with the new conditions brought about by the automatic machine and power machinery in general. It was the discussion of what determined wages and the survey of the distribution of purchasing power that led to the conclusion that the promise of plenty held out by the machine age was largely as yet an empty promise.

An investigation of value led us to believe that its peculiar nature in a society of private capitalism was the basic reason why a world of distributed abundance had not been attained. The fact that economic value depends upon relative scarcity goes to the very heart of our difficulty. For a thing to be valuable it must be scarce. Economic welfare demands abundance.

Education must frankly face the issues involved in our present economic problems. The kind of education that was adequate for a slowly changing world of scarcity is inadequate for the present rapidly shifting world of abundance. The education that was adequate for a world of hand machinery has little reality in a world of automatic machinery. We have seen the tragedy that comes to a world which is not organized to use the output of these machines.

We hope that enough material has been presented to awaken in the reader a consciousness of the great increases in human welfare that are now possible. To do this and thereby stimulate further study of economic problems and theory so that a broader basis of attack on such problems may be obtained has been the main effort of this book. We hope that our approach has been such that the reader will realize that a solution of present-day economic problems for our democracy lies very largely in mass education. This and not a detailed theoretical discussion of economic theory has been our aim.

In spite of the fact that the schools are only one of many social institutions, they will be able to do infinitely more than any of the others to bring about the intelligent understanding and broader moral sense necessary to the solution of economic problems.

Throughout the book we have pointed out that rational planning and control of our productive forces appears to be the only feasible solution to the difficulties that beset us and the only method by which we can realize the potential plenty that would so improve the lot of mankind. We have suggested lines along which the planning might take place and illustrated our position with detailed plans for certain sections of activity.

Since some knowledge of economic problems is necessary to an understanding of how a world of sufficiency may obtain, since such a world is what man is consciously or unconsciously seeking, and since such a world is impossible without the intelligent effort of a majority of our population, it is fitting, indeed imperative, that all of our leaders, especially those who lead us in our years of training and education, should bend every effort to spread such knowledge of economics as is a primary condition to the full gratification of human wants.

Education must play a significant part in the reconstruction and rebuilding of American economic and social life. To play that part, teachers must be well informed. They must be conscious of the issues and changes that should be made in the school curriculum. They must be dealing with the real problems of the real world. It is possible to bring the economic and social world under more rational control. Adequately trained teachers and a vital curriculum must play a significant part in this process.

You Have Studied a Rapidly Changing Subject. The subject matter of economics changes very rapidly. Many things which you have been told in the preceding chapters may not be adequate or even true within a few years. Many of the facts will be out of date; many of the theories will have been modified, or new theories will have been substituted for them. Perhaps the most important thing you should learn from a study of economics is how to keep up with these changes.

Very few of you will become professional economists. Of the million or so young people in college in the United States at any one time, only a few hundred are training to

become economists. Practically all of you, however, will be affected by economic changes as long as you live. It is important to know how to continue to study the subject, not as the professional economist, but as teachers and intelligent citizens.

You should know by this time that it is possible to create satisfactory economic conditions for practically the entire population. You should have some idea of ways to begin bringing this about. You should also have some knowledge of the items about which you need more information. You should be fairly clear in your own mind about the fact that society can use the labor of all its people. You should have reached some decision regarding many of the new things society needs. You should realize that supplying these needs would furnish employment for more people than have ever been in the army of unemployed in this country. New cities are needed—new and better housing, more and better park and play space, better traffic facilities. There should be an enormous increase in the amount and range of education provided, of health service, and of facilities for artistic expression. Perhaps the greatest increase of all in the immediate future would be the facilities for travel for the entire population. Providing as much travel as would be desired would probably require many millions of workers. You should try to become informed regarding some of the new things that are possible and some of the newer ways of doing many of the old things.

Topics Not Discussed Extensively in This Book. The range of economic problems has become so large that one could spend four years in college studying nothing but different courses in economics. For this reason any selection

of material for one volume necessarily has to leave out a large number of highly important topics. This volume is no exception. The topics which have been discussed were chosen to give an indication of the variety of problems and above all to indicate that their solution was primarily an educative process. In the future, as time is available, the topics discussed in this book should be investigated further and, if possible, an elementary survey of the general field made.

Among the more important topics which have been omitted is the (1) co-operative movement. Particularly important are agricultural and consumers' co-operative organizations. If a democratic solution to our economic problems is found, the co-operative movement may indicate the direction in which the solution lies.

The organization of (2) labor unions is another topic which scarcely has been mentioned. Entire courses are organized around this topic and many people think that any satisfactory solution of our economic difficulties will have to include strong labor unions. The topic might well be studied in the future.

Almost nothing is said in the book regarding (3) taxation. Practically all of the older textbooks in economics include a discussion of this topic. This was particularly true in the early days when our subject was called "political economy" and dealt largely with the welfare of the state. Any teacher might well spend much time studying taxation. There are important reform groups in the country who maintain that income-tax and inheritance-tax policies constitute the most feasible method of making the most important social improvements.

Almost nothing has been said in our discussion about types of (4) business organization or about (5) the major industries and occupations. Some books spend much time on industrial and business organization and financial and accounting practices. There has been no discussion of (6) business cycles as such. (7) Money and banking have been largely omitted. (8) Transportation problems and (9) international trade include other very large sections in the field of economics which are not treated.

By far the most important omission in this book, from the standpoint of many people, would be the fact that it has not discussed the important questions that have stirred economic theory for the past 150 years. More particularly, there is very little discussion as to the nature of economics and the methods to be pursued in studying it. The nature of value and of price and the distribution to the different categories of production are only briefly mentioned. Supply and demand, theory of rent, interest, profit, and wages are not elaborated.

All of the topics mentioned above may be exceedingly important to one who is going to become a technical economist. It is very doubtful, however, if a consideration of such items is the most fruitful approach for one beginning the study of economics.

How to Go On with Your Study. Each person who begins the study of economics in school should be shown how to continue his study after leaving school. Every intelligent adult in the ordinary course of his reading and discussion considers many economic problems. Many teachers read much in the daily papers and the general magazines regarding economic matters. But some more systematic

sources of information than these can doubtless be used by anyone who wishes really to investigate the problems of economics. The best way to keep acquainted with what is happening in the economic field is through the technical journals devoted to economic matters. If we may assume that one is reasonably well informed about economic matters, these technical sources may be the most satisfactory place to go.

The arrangement of sources might be somewhat in the following fashion: (1) A newspaper or news magazine that will give some of the current economic facts as accurately as possible. (2) Popular magazines, such as *Harper's*, *Atlantic Monthly*, the *Saturday Evening Post*, *Collier's*, *The Nation*, and the *New Republic*. These have many general articles on economic matters. (3) Technical magazines and papers that carry much current economic information; such papers as the *Wall Street Journal*, *Chicago Journal of Commerce*, and many others; such periodical publications as *The Annalist;* publications such as the *Bulletin of the Federal Reserve Board*, the bulletins of many of the larger banks including the twelve district Federal Reserve banks, and a long list of magazines in almost every special field of economics. There are technical journals in agriculture, manufacturing, banking, labor, and many other sections of our economic life. Most teachers will rarely have any difficulty in reading almost any of the material up to this point. (4) But for anyone who wishes to become well informed regarding economic theory, such publications as the following should be used, although at first some of the articles may be found difficult to read: *The American Economic Review; The Economic Journal; The Journal of Political*

Economy; The Quarterly Journal of Economics; and *The Political Science Quarterly.*

During the course of the past few years there have been many popular books on almost any phase of the subject. There is a very large number of technical books which can be obtained from any large library. There are also many pamphlet series which deal with various aspects of current economic problems. Some of these series are listed at the end of this chapter.

In recent years the radio has become a very considerable factor in providing knowledge on economic matters. If one would take the trouble to keep informed about some of the better lectures being given over the radio in the field of economics, one would find it helpful in understanding and interpreting current economic issues. The National Commission on Radio and Education and various other organizations sponsor systematic series of lectures dealing with economic problems. Many of the state universities broadcast series of lectures on economic problems.

An excellent way to continue to remain informed in the field of economics is to organize local discussion groups. There is no reason why in every community there should not be groups discussing current economic issues. If there are no such groups available which teachers can join, they should organize one. A group that would meet once or twice a month and discuss the outstanding economic issues of the time would do much to keep its members currently informed.

Bibliography of Suggested Sources for Continuing Your Study

TECHNICAL THEORETICAL MAGAZINES

1. *American Economic Review.* Executive Office of American Economic Association, Northwestern University, Evanston, Ill.

2. *The Economic Journal.* Macmillan and Company, London, England.
3. *Journal of Political Economy.* University of Chicago Press, Chicago, Ill.
4. *Quarterly Journal of Economics.* Harvard University Press, Cambridge, Mass.
5. *Political Science Quarterly.* Published by Academy of Political Science, Columbia University Press, New York City.

In addition to these more general technical and theoretical journals there is a very large number of specialized technical journals in the fields of banking, labor, transportation, and in many other fields. These can be located either through your librarian or through the magazine articles listed in the back of the *American Economic Review.*

The publishing addresses of popular magazines containing economic material can be obtained from any librarian.

BULLETIN AND PAMPHLET MATERIAL

There are a large number of organizations publishing material in pamphlet form. Many of these are of great value to teachers wanting to keep informed in the field of economics. New series are being started frequently and can probably be located in your library.

1. *Rural America.* American Country Life Association, New York City.
2. *Unit Study Booklets.* American Education Press, Columbus, Ohio.
3. *Economic Series.* National Advisory Council on Radio in Education, University of Chicago Press, Chicago, Ill.
4. *Exploring the Times Series.* American Library Association, Chicago, Ill.
5. *International Conciliation Pamphlets.* Carnegie Endowment for International Peace, New York City.

6. *John Day Pamphlets.* John Day Co., New York City.
7. *Chase Economic Bulletins.* Chase National Bank, New York City.
8. *World Affairs Pamphlets.* Foreign Policy Association and World Peace Foundation, New York City.

BOOKS

There are good book reviews in the technical journals. Those in the *American Economic Review* are particularly good. The larger metropolitan newspapers usually carry a list of new books in their Sunday editions. Any librarian will be glad to recommend new books in the field of economics. For some of the so-called popular books, see the bibliography at the end of each chapter in this volume.

USE OF YOUR LIBRARY

The librarian in your public library or in your school library will be glad to help you find material on any phase of economics. If there are no local libraries or if they are inadequate, the state library will be glad to recommend books and usually has arrangements for supplying them. The extension divisions of many of the state universities will also be glad to make recommendations about books and in many cases are able to supply bibliographies and other services and sometimes are equipped to provide books.

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APPENDIX

PERSONAL ECONOMIC PROBLEMS OF TEACHERS

A Program of Saving. A teacher should begin saving as soon as the first salary starts. The first things to be guarded against by saving are emergencies, such as sickness and accident. In many school systems the teachers are protected against losses from a short illness or an accident that keeps them from working for only a brief period. In case the illness or accident prevents the teacher from working for a longer period, the individual is usually left to his own resources. For this reason it is important to build up an adequate program of insurance to protect one in such events. Unless such protection is provided for by the school, disability and accident insurance should be seriously considered.

In almost any other occupation some attention would have to be given to unemployment insurance. In anything but the most unusual times the average teacher faces little prospect of unemployment once he has obtained a satisfactory position.

The second step in the teacher's personal program of saving would be to provide for adequate retirement annuities. In many states such provision is compulsory. In these states the school authorities require each teacher to save a small proportion of his salary each month; when he retires this is returned to him, with accumulated interest and sometimes a contribution from the school system, in the form of monthly payments. If provision for such annuities is not

required, the teacher should see to the matter himself. With teachers' salaries as low as they are, it is difficult to save sufficient money each year to secure an adequate retirement allowance; but some attention should be given to this matter. The effort should be to contribute enough to a retirement fund handled by an insurance company so that the annual payment or annuity from the time of retirement will be at least half of the annual salary which was received during the last ten or fifteen years of work. It would be better perhaps if the annuity could be two thirds of this annual salary.

If the teacher has other people dependent upon him, adequate life insurance should be obtained. But in ordinary cases when there are no dependents, provision for retirement by means of annuity is probably more important than life insurance.

After a satisfactory program of insurance has been built up, the teacher is ready to face the problem of the next step in a program of saving. From the very first a small amount of money should be kept in a bank for purposes of paying current bills. The amount will, of course, depend upon the average rate of expenditure and somewhat upon the requirements of the bank in regard to the size of deposit required.

After this amount has been accumulated and after the program of insurance has been planned and allowed for, if there is additional money to be saved, it perhaps should be put in a good savings bank. It is difficult to give exact amounts because individual cases vary so much. However, a safe policy would be to accumulate $500 or $1000 in the savings bank before other investments are considered. In case there is not a good savings bank readily available, the

money could be put in any United States Post Office, which is a postal depository. If one has any doubt at all regarding the savings bank, this would be the conservative policy in any case.

The United States Government guarantees unconditionally all deposits in the Postal Savings System. At the present time almost all the banks in the country are insured with the Federal Deposit Insurance Corporation to the extent of $5000 for each depositor. This means that if your deposit is less than $5000 you have what is almost equivalent to a Government guarantee that your money will be paid. The conservative policy would be to keep this first $1000 either in the bank or in the Postal Savings System. It would provide for any emergencies or other situations which would demand its use. One will get 2 per cent interest in the Postal Savings System and usually between 3 and 4 per cent in the savings bank. These rates are low, but it is far more important to have the first money safe than to try for a high rate of interest.

There is much to be said in favor of investing a few dollars a month in co-operative credit unions. These are being established all over the United States. Essentially the scheme is for a small group of people to unite and form a credit union. Each person pays in a small amount of money and in turn can borrow money from the union, if he ever needs to. In a way it might almost be called a small mutual bank run for the advantage of those who put their money into it. It has the advantage of being easily organized and relatively safe, if properly managed. Anyone wanting to borrow money will be known by practically everyone in the union. This will go far toward determining whether the risk is satisfactory.

Money invested in the co-operative credit unions usually returns between 5 and 6 per cent interest. Usually the person who borrows money is supposed to pay about 6 per cent with perhaps certain additional charges. The small difference in these interest rates means that the work of the union must be done almost for nothing.

Another type of organization for saving which has played a large part in the history of this country is the building and loan association. Unless the teacher knows something of the management personally or unless the organization has a long and successful record, it should be investigated most carefully. In any case only a small proportion of savings should be so invested. As the name implies, such associations exist primarily to furnish money to people who want to build or repair homes or other types of buildings. Most of the loans are made to home owners. The usual scheme is to have one pay in a small amount weekly or monthly and over a period of time to pay for shares in the association. Sometimes paid-up shares can be bought in case one has the cash available. Loans are not confined to members of the association, but anyone can apply who comes within the classification of the particular association. The building and loan associations usually pay fairly high interest, many times from 5 to 7 per cent.

After the insurance program and the first savings have been accumulated, one might consider investment, more strictly speaking. Again the conservative policy would be to put the next money one saved in United States Government bonds. Probably from $2000 to $5000 should be invested in this manner before one considers other types of investment. It is quite true that one will have to be satisfied

ordinarily with interest of between 3 and 4 per cent on such bonds. In unusual periods the interest rate will be less and in very exceptional cases somewhat more. But ordinarily one should not expect more than this return from bonds that are practically risk-free.

After one has accumulated from $2000 to $5000 in United States Government bonds, one might consider buying other conservative bonds. The bonds of some of our states and cities rank exceedingly high. Others have a much lower standing. Advice should be sought from a competent banker or some other informed but disinterested person before any particular bond is purchased. If difficulties have been experienced in meeting interest payment at any time during the past ten or fifteen years, one should investigate the bond especially carefully. Extreme care must be exercised in purchasing bonds from salesmen, as they are far more likely to be interested in selling a bond than in its suitability for the person to whom they sell it. Ordinarily, it would be prudent to have the opinion at least of your local banker regarding the bond before it is bought.

Almost in the same class, as far as safety is concerned, with some of the better public bonds, are the bonds of some of the leading railroads, public utilities, and industrial concerns. Here, of course, great care has to be exercised and competent advice should always be sought. Bonds of progressive concerns that have easily met their interest requirements during the past ten or fifteen years might be considered. The advantage of these bonds as compared with Federal Government bonds is the higher interest rates. Many good city or industrial bonds can be bought that will yield a full per cent more than Federal Government bonds. In ordinary times

one might reasonably expect a return of between 4 and 5 per cent on fairly conservative bonds in this class. One might buy from $3000 to $5000 of bonds in this class before he began to consider other types of investments.

At this point in his program of saving, the teacher is certainly justified in considering the buying of some land or a house if he is thoroughly acquainted with what he is buying. In exceptional cases, of course, it would be advantageous to buy a house much earlier in the program, but unless a substantial amount of money has been accumulated, there are grave dangers in buying a house. If one bought land or a house at this point, it should not be necessary to sell any large amount of previous investments. In most cases the first thousand dollars in the savings bank and the two to five thousand dollars in Government bonds probably should remain in such investments permanently unless needed for an emergency. Some of the other bonds might be sold in special cases for the purpose of making advance payments on a house or on land.

There is another type of investment that many people would put beside the most conservative bonds. These are so-called first mortgages. The losses in this field were very great between 1929 and 1933. For this reason many mortgages are not considered so safe as they were at one time. Unless one has first hand knowledge of the building or the property on which the mortgage is issued, it is not likely to be the most desirable kind of investment. In case such personal knowledge is available, a somewhat higher rate of interest can usually be earned on money invested in this manner. From 5 to 6 per cent interest is not unusual on reasonably safe mortgages. It is important to keep in

mind that a so-called guaranteed mortgage is not necessarily well protected and may not be a good investment.

After one has accumulated a total of perhaps $10,000, one might then consider investing some of one's additional savings in common stocks. One must recognize that this is an exceedingly dangerous field of investment for the ordinary individual. For practically any teacher, the only stocks that should be considered are those of old, seasoned, and successful concerns. It is a safe rule never to buy stocks from a salesman. If you must buy stocks, buy them through your bank or some other agency that you know and trust. You perhaps may be able to earn a somewhat higher rate of income on stocks than on bonds, although when good years are averaged with bad, this does not necessarily follow. Stocks, of course, have far greater probability of increasing in value and also of increasing the return you get from your money. But at the same time they carry more danger of decreasing in value and decreasing the amount that you get from your money. One may expect almost any rate of return from no return at all up to 6 or 8 or even 10 per cent on money invested in certain stocks. Perhaps $5000 could be invested in conservative stocks before one should consider another step in a financial program.

For most teachers the program outlined above should be the complete program and all additional money should be invested in high-grade bonds and carefully selected stocks. Occasionally a person will insist upon going on to the next classification and in indulging in sheer speculation by buying ordinary or unseasoned common stock or experimenting with other channels of speculation. There are a few suggestions that can be made that may obviate or reduce losses of any-

one who is determined to do this. In the first place, it is probably wise to confine the maximum amount of money to be spent in speculation to 10 per cent of the annual savings. Then, by all manner of means, the money should be considered lost and marked as lost upon your books. If one has

TABLE XVI—PROGRAM OF SAVING FOR TEACHERS

Group No.	Amount Saved or Invested	Kind of Saving or Investment	Yield per Cent	Cumulative Amount
1	$50 to $100	Checking account to pay current bills	0	$100
2	$25 to $200 per year	Sickness, disability insurance, retirement annuity, life insurance	Dividends vary probably from 2 to 4	Cash value dependent upon number of years paid
3	$500 to $1000	U. S. Postal Savings or savings bank	2 3 to 4	$1100 plus insurance
4	$2000 to $5000	U. S. Government bonds	3 to 4 usually	$6100 plus insurance
5	$3000 to $5000	Ultraconservative municipal, state, or industrial, railroad, or utility bonds	4 to 5 usually	$11,100 plus insurance
	In some cases home or land or mortgages might be bought at this stage.			
6	$3000 to $5000	Conservative common stocks	4 to 6	$16,100 plus insurance
7	As a maximum, 10 per cent of annual savings after above program	Ordinary and speculative common stocks	From 0 up	
	Money in this classification will many times be lost and is not a satisfactory type of investment for teachers.			
8	From this point on money should be divided among groups 2, 4, 5, and 6—perhaps 25 per cent to each.			

accumulated adequate insurance and at least $15,000 in other types of investments and will follow these suggestions, speculation may not be too disastrous. The grave danger, of course, is that one will make a substantial amount of money by investing a small amount and then decide he can make a large amount of money by using more of the previous savings. This should not be considered under any circumstances. The savings program up to this point should never be disturbed for the sake of speculation.

Spending Money. More information is needed about things for which teachers should spend their money. Everyone has to buy food, clothing, and shelter, but no standards are available even in these fields. There have been investigations of what teachers actually do spend their money for. The following table is based upon several of these studies:

TABLE XVII—AVERAGE PER CENTS OF INCOME USED FOR VARIOUS PURPOSES BY TEACHERS[1]

Food	15	Recreation and education	12
Clothing	10	Gifts and aids to dependents	13
Shelter	19	Taxes and miscellaneous	10
Health	5	Savings	16

The table when compared with the expenditures of other groups shows that teachers spend a smaller percentage of their income for food, clothing, and shelter than most other people of comfortable income. In turn they spend a far larger percentage for further education, for travel, and for books and magazines. But even so, about half of the teach-

[1] *The Teacher's Economic Position.* Report of the Committee on the "Economic Status of the Teacher" of the National Education Association.

er's income is spent for the basic necessities in food, clothing, and shelter.

For this reason it is extremely important that he have more information than is now available regarding adequate standards in these fields. In order to obtain this information, organization will be necessary. This organization will have to be carried on at several levels. There should be highly technical research organizations providing information regarding the technical aspects of food, clothing, and shelter. These organizations should discover the basic requirements of food, how much of each kind is needed, and the most advantageous way to get it at different levels of income. The standards of clothing ought to be investigated and the quality of various kinds of material presented. Adequate housing should be discussed in terms of the best kind of building materials, the location of housing, the most economical way to provide it, and other similar items.

There should be large economic research organizations to study the economic basis of these three items. The economics of housing and of providing food and clothing should be discussed and understood by everyone in the entire school system. Particular attention should be given to this in the teacher-training institutions.

There should be highly technical investigations in all of these fields. There should be an organization of education to disseminate the information discovered and in addition there should be organized consumers' co-operative organizations of all kinds that will be capable of carrying out what has been discovered. This will require far more adequate consumer organization than has yet been developed in any country of the world. The school should play the most important part in this process.

Spending for Further Education. Almost every teacher plans to spend a considerable portion of his income for further education and training. Formerly teachers were rather poorly trained when they began to teach and had to use this process of obtaining the education which they should have obtained before beginning. Now the typical teacher is far better trained to begin his work. If anything, it is even more important that he make provision to continue his study at frequent intervals. In the world of today there are very rapid changes in almost all fields. Teachers are busy with their own work and find it extremely difficult to spend an adequate amount of time in study while they are working. Many of the technical discoveries and advances are not known by teachers for many years after they are made. Just as many medical schools are making provision for doctors to return and take short courses to become acquainted with the newer developments in medicine, so teacher-training institutions must make provision for short unit courses in order to provide the newest information in the field of education.

In most communities further training is an important part of the process of securing advancement. At the present time it is necessary for the teacher to spend an entire term or summer session in study. Increasingly in the future it will doubtless be possible to get short periods of time of a month or six weeks off from his duties in order to get further training along a particular line. The training institutions in turn will have to provide for this kind of service. The wise teacher of the future will systematically save part of his income for further education.

Spending for Magazines and Books. Any teacher who plans to be at all efficient in his occupation, should system-

atically plan to spend a certain amount of money in buying professional and general magazines and books. The teacher should be a member of his local, state, and national professional organizations. These in turn will provide him with a certain minimum amount of information in the form of the magazines they publish. In addition, the teacher should probably subscribe to one or two magazines in the general field of education and one or two in his special subject or division. Over and above this the progressive teacher will plan to read a variety of books each year dealing with professional aspects of education. This should be supplemented by as wide reading in more general fields as time will permit.

The ordinary teacher's salary will not allow any large amount to be spent for books. If ingenuity is used, this should not keep the teacher from access to new reading material. Many teachers have found that a book club or organization can be established that would buy ten or fifteen or twenty books a year which can be passed around in the group for each member to read. If each teacher would make it a point to join such an organization when available, or when not, to organize one, an important step in professional growth would be assured. It would be the very minimum to expect each teacher to read at least ten books a year in the general field of education and in his special field, and an equal number in the broader fields of human culture. In many communities there are school or town libraries that will make it possible for most teachers to do this reading even if the budget will not allow any money to be spent for books.

Spending for Travel. It is becoming increasingly desirable for teachers to be acquainted with communities other

than their own. During the past two decades there has been a great expansion of travel on the part of teachers. This movement should be encouraged. If at all possible, each teacher should plan as a part of his spending to provide for a trip each year or every other year at least. The extent of this trip will naturally depend upon the amount that can be made available for this item. Even if it is only a short trip to other parts of the same state or to surrounding states, carefully planned and wisely timed, the trip should prove of real value. Many times a trip can be planned to a meeting of the state or national or special educational convention and combine many of the advantages of travel with other professional advancement.

Where a larger sum of money can be made available for this purpose, trips to other countries are exceedingly valuable. It is especially important that teachers should realize that other peoples live and act differently in many respects from the people of their own country. If we expect to raise the level of culture and action of our students by means of education, it is important to be acquainted with the best that is going on in other lands. Many teachers do not get the greatest return from their travel because they have not found out enough about other countries before they start. It is important to know something of the history, customs, geography, and current conditions in a country before one visits it. Only in this way can the greatest return be obtained by money spent on travel. As teachers' salaries rise, it is to be expected that they will travel more and more. If this is wisely done, it should be of very great advantage to the children they teach. Just as soon as possible every teacher should systematically save in order that he may travel.

Social Effects of Spending. Each person should realize that there are social effects from spending money. If millions of people spend lavishly on certain items one year and nothing on them the next year, the industries furnishing such items will have serious difficulty. An obligation rests on individuals to plan their expenditure so that it will have as desirable a social effect as possible. The particular things that people buy have a very great effect upon the economic problem. Of course it would make no difference if one teacher saved a great deal one year and nothing the next year. But if millions or tens of millions of people did this it would make a very great difference in the items sold and in the employment in large sections of our economic order. Spending without proper information and buying inadequate materials also have their social effects. Every teacher has an obligation to see that complete information is available regarding the quality of what he does buy, regarding the desirability of buying the article, and regarding the time and the conditions under which he buys it. No one teacher, of course, can greatly change these matters. All teachers and all citizens working together could very quickly change them. The important thing is that teachers be alive to the social effects of their spending.

Obtaining a Job. The difficulty of obtaining a job for the well-prepared teacher varies greatly from time to time. For some time after the World War, almost any well-qualified person could easily get a position. More and more teachers were trained, until by 1929 it was becoming increasingly difficult to find a position immediately. With the retrenchment in education that came with the depression of 1929–33, it became exceedingly difficult to secure a position. As

jobs became more difficult to get in industry and in business, more persons turned to teaching. Many persons who had formerly taught tried to return to the field. All of these factors caused a relative overcrowding in the profession. As has happened so many times in the past, this overcrowding will in time reduce the number of people preparing and consequently cause a shortage. The only way to avoid this is to have some more nearly adequate system than we now have of planning the number of teachers needed and the number to be trained.

In one of the periods of relative undersupply, a teacher can obtain a position with scarcely any difficulty. Simply registering with the institution from which he has graduated or applying in a few communities is usually adequate. When there is a relative oversupply of teachers, far more drastic steps will have to be taken. The teacher should register with his local institution and with the state teachers-employment bureau, if there is one. All possible openings will have to be investigated. It may even be advisable to register with the commercial teacher agencies.

Advancing in the Job. The assumption is made, to begin with, that the teacher is well trained and enthusiastic about his work. There are usually two possible lines of advancement open. One is to try to get further preparation and training and to move to a position that will pay a larger salary. If one is teaching in the elementary school, this usually means a transfer to a high-school position. If one is in high-school teaching, it may mean a change to an administrative position in either the elementary or the secondary school. There are some unfortunate aspects of this method of advancement. Many competent authorities

wish that it were possible for an able teacher to proceed in his field of interest. But again any realistic discussion of advancing must admit that in too many cases the only practical thing to do is to change positions.

In some cases it is possible to remain as a teacher of the second grade or of English in the high school and to move forward to a satisfactory level of income. If one is in a small community, this almost certainly involves a transfer to a larger community. If one is in a large city, it may be that further training and experience will bring satisfactory advancement in the same position.

How Much Teachers Earn. Table XVIII gives the actual facts regarding the average earnings of teachers during recent years:

TABLE XVIII—HOW MUCH TEACHERS EARN

Average of All Teachers (1929),—$1375

Kind of Service	Salaries in 1932–33 [1]		
	City over 100,000 Population	City 10,000 to 30,000 Population	City 2500 to 5000 Population
Elementary-school teachers	$1947	$1360	$1089
Junior-high-school teachers	2204	1525	1270
Senior-high-school teachers	2479	1747	1429
High-school principals	4468	3300	2134
Superintendents	8267	4600	3216

Look up the most recent figures and insert in the tables.

[1] Taken from *Salaries in City Schools, September, 1932–33.* Research Bulletin of the National Education Association, March, 1933.

This particular table shows that the average salary of teachers reached a maximum of approximately $1400 in the year 1929. Certain classes of teachers, of course, were paid at a very much higher rate. In the cities of over 100,000 high-school teachers averaged about $2500. Some high-school teachers made from $3000 to $4000 or even $5000 per year. As against this it must be remembered that tens of thousands of teachers in the one-room country schools taught for $500 or $600 or $700 per year.

There seems to be good evidence that the average level of teachers' salaries has moved forward more rapidly than the average income of occupations as a whole. There is every reason to expect this tendency to continue over the longer period. Relatively to other occupations, teachers probably will be more highly paid twenty years from now than they are today. This assumes that the tendency will be to demand abler people for the teaching field.

It is important for teachers to remember that their average incomes cannot be raised very greatly, however, unless the entire income of the country is advanced very sharply. This should point out to teachers the importance of operating our economic order at a much higher level. With relatively minor changes, we could easily produce 100 per cent more than we were producing in 1929. If education performed its task properly, there is every reason to think that it could play a significant part in very greatly raising the total income of the country. This is the only way there can be any great increase in the average remuneration of teachers.

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